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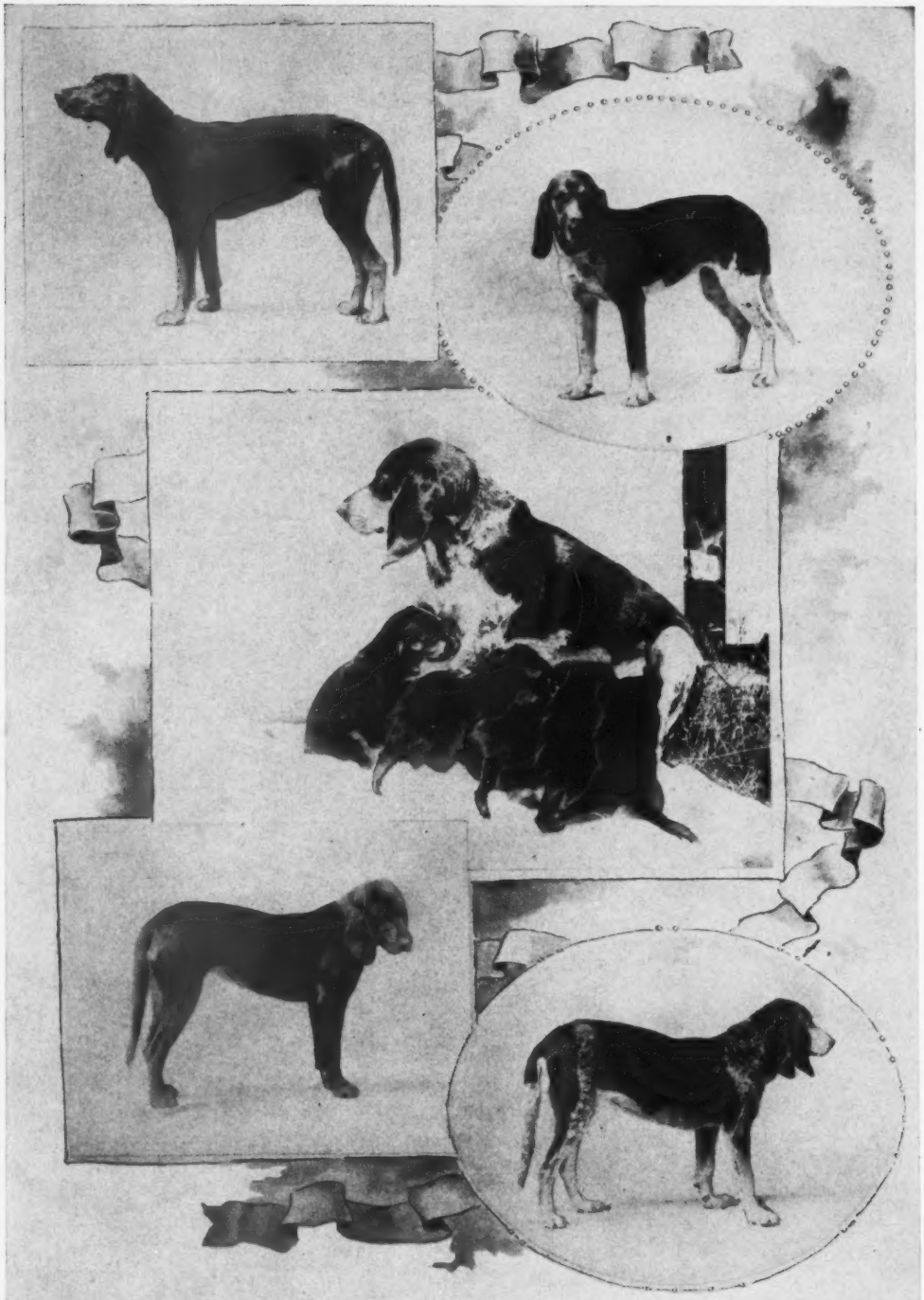

TYPES OF ADIRONDACK DEER HOUNDS.

From the Annual Report of the Forest, Fish and Game Commission, 1901

PROMOTION?

Waiting for us at home the other night, along with the rest of our meager mail, was an envelope containing a piece of advertising promotion for one of this country's biggest sportsmen's magazines. As a matter of fact the promotion started right on the outside of the envelope; in big type, next to our name and address, was this:

WANT TO

Shoot More GAME?

Catch More FISH?

see inside

So we saw inside, and there of course we found the answer; if we wanted to shoot more game and catch more fish, this magazine would tell us how to do it. There were a lot of pictures suggesting the many attractions of the magazine, and a lot of words—but *Conservation* was not among them. Yes it was too; in fine print at the bottom of one page was the "Conservation Pledge." It looked lost; like lip service.

Any normal hunter or fisherman would like to have better luck. But suppose we all subscribe to this magazine and learn all the tricks of the trade about shooting more game and catching more fish, there's still one big question: Where is all this fish and game going to come from? Conservation Departments can't pull rabbits out of a hat, and we don't know of anybody else that can either. But it looks like we're going to need an awful lot of rabbits.

Perhaps there wasn't room for conservation in the advertising piece that stirred this up. The people that got this piece out must know their business, and you can't blame them for trying to capitalize on the sportsman's desire for a little extra know-how. But the fact remains that somebody is fooling somebody, because in this day and age you can't shoot more game and catch more fish—not for long, anyway—unless you do something about *producing* more game and more fish. We would like to have seen this idea at least mentioned in the advertisement.

In fact (and this of course is what we've been leading up to—the advertisement just touched it off) Conservation could get a lot more help from commercial sportsmen's magazines than it's getting right now. With their big circulations, they could cut a good deal more ice than small state publications like this. And there is a pretty convincing argument they could pass along to their subscribers: If they want to *take* more fish and game, then they'd better pitch in and help *make* it. Then the magazines might tell their subscribers how to do this. Such information doesn't have to be dull, and there's a lot of it available.

—Editor

THE NEW YORK STATE

CONSERVATIONIST

Deer Hound with a Record.

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Game Laws—and

Better Laws:

THOUSANDS of sportsmen will be as happy as we are about the fact that our 301-page *Fish and Game Law* has been sent to the legal hospital for a complete face lifting job and a major reducing treatment—the first recodification of any kind in 14 years, and the first major overhaul since 1911.

Few will question the necessity for such a job. According to Dr. Ira N. Gabrielson of the Wildlife Management Institute, our fish and game laws have the dubious distinction of being "the worst mess" of any he has ever studied. And there are plenty in our own sporting fraternity who will call this a gross understatement.

While many of the basic provisions of our law represent some of the most progressive legislative steps in conservation that have been taken anywhere in this country (other states have copied a lot of them), it is not difficult to see why our law as a whole has become so voluminous, complicated, and hard to follow. Over the years there have been literally hundred of amendments to it. They originate from a great variety of sources both within and without the Legislature, and despite careful screening by legislative committees and the Governor before he signs them, they have added up to a cumbersome and somewhat disjointed whole.

Unlike many other states where hunting and fishing is governed by commission or department regulation, our State continues to regulate principally through legislation. Thus, to lower the size limit or increase the creel limit on any species in any one of our hundreds of waters, for example, requires a special act of the Legislature.

Further complications have arisen in recent years because, as our knowledge of our woods and waters has increased, it has been necessary to write special conservation prescriptions which will better meet the needs of various regions and localities. State-wide laws have become fewer, and local exceptions ever more numerous. And we must not forget that our ranks of sportsmen have doubled and tripled —creating many problems which have required legislative action.

On this score, I think all progressive sportsmen realize that the time has passed when we could properly manage our wildlife resources with a few simple laws of State-wide application. In fact the sportsmen themselves, through their clubs, federations and their State Conservation Council, are constantly studying, discussing, and backing new legislation calculated to improve the management of our fish and game. They fully accept and exercise their responsibilities in this direction and are working ever closer with their District Game and Fish Managers and others in the Department towards the common goal of better wildlife conservation. We must all realize, however, that this tends to complicate the law still further—which makes it even more important that our laws be reduced to the greatest possible simplicity and clarity.

The first and most important step in building a modern set of fish and game laws is to reorganize, simplify and shorten our present statutes by recodifying them. This is a long tedious job in which we have enlisted the help of the counsel who did such fine work in connection with the Pollution Control Act of 1949, Armand Adams. Through that experience he gained considerable knowledge of parts of our fish and game law.

It is hoped that a draft of the recodification will be available sometime during 1953. When this has been enacted, attention can be given to the revision of those parts where study has indicated the necessity for it.

Our goal: A law at least a third shorter, ten times as readable, and more efficient as an instrument for fish and wildlife conservation.

—PERRY B. DURYEA

Better Law Enforcement:

REGARDLESS of the steps taken to enforce any law, the complexity of the law itself has a direct relationship to the satisfactory enforcement of it. A clear, simple law is relatively easy to enforce; a complex law, relatively difficult. Thus the recodification of the fish and game law will, at once, mean that the enforcement of it will be a much easier job. From this standpoint, recodification will provide an important link in the enlarged law enforcement program which Commissioner Duryea inaugurated early in his administration, and will greatly strengthen the efforts of the Department's enforcement staff.

While other segments of this enlarged program have been mentioned previously in THE CONSERVATIONIST and in Department reports, it might be desirable to review this program in a general summarization, not only to indicate what has already been accomplished, but to underline the importance of the recodification to the success of our enforcement program. To do this it is not enough simply to list the things that have been done to strengthen our law enforcement work; changing conditions and circumstances must be considered as well.

First, let's go back to the close of World War II, for it was then that the enlargement of the program began. One immediate and basic change which occurred at that time was the tremendous upsurge of public interest in the State's natural resources and their use—all part of a general trend throughout the nation. A second basic change was the increased amount of leisure time that people had as the result of a shorter work week in business and industry. These two changes produced millions, where formerly there were only thousands, of people who looked to our natural resources for their leisure time recreation. As a major re-

Law Enforcement

source of the State, fish and game naturally attracted the lion's share of attention from this veritable army of outdoor enthusiasts. Today there are nearly twice as many licensed hunters and fishermen in the State as there were in 1945; the direct result of these two changes plus (the last census shows us) increased population.

The impact of this unprecedented pressure on fish and game called for an immediate stepping up of the Department's services and expansion of its facilities. This pressure and the post-war wave of lawlessness among people going afield placed the enlarged law enforcement program high on the Department's order of business. The staff of the Bureau of Law Enforcement was increased by 30 new Game Protector positions. New and improved equipment was provided to replace worn out and obsolete material and to make additional equipment available. New boats and outboard motors and inboard motorboats were obtained for patrolling and giving additional protection to our lakes and streams. Walkie-talkie radios were placed in use with excellent results. To provide greater mobility for the field staff, motorcycles were obtained and a number of Protectors trained in their use. Law enforcement is airborne now too, with Department planes being used on special types of enforcement problems.

While men and equipment constitute the first requirement of a good law enforcement staff, a good staff can be made a better one through proper training. Training courses have been conducted for all new members of the staff during the past few years and this summer, training was given to every officer in the Bureau. Between August 22 and 30 two three-day training sessions were held at the DeBruce and Ray Brook Conservation Camps for the entire staff of Game Protectors. In June, a training school was conducted for all of the District and Assistant District Game Protectors at the DeBruce Conservation Camp. The June course, a 40 hour course in "Leadership and Supervision," was especially designed for the personnel which participated in it (the first of its kind ever given for Department personnel) and was prepared and conducted in collaboration with the Training Division of the Civil Service Department. To show the practical nature of the course, the following case problem is one of a number used in the course:

"Game Protector W. has been with the Department about four years. He is generally acknowledged to be a hard working Protector with a thorough knowledge of the Conservation Law. However, each time he has apprehended a violator during the past year or so, trouble ensues.

"The cases he turns in involve positive violations and are not of a technical character, yet the officer invariably gets into an argument with the violator. Each incident seems to follow the same pattern. After the officer has apprehended a violator he 'tells the violator off' in a loud voice, threatens him with the maximum penalty for the offense, and argues with the violator all the way to the courtroom.

"The District Game Protector, promoted to this job six months ago, knows that he has to do something to remedy this condition but is not sure just how to go about solving this problem."

If you were the District Game Protector, what would you do?

In spite of the major improvements that have been made, there are many who feel that the Department has not gone far enough in the enlargement of its enforcement program. The continuing heavy pressure on our fish and game resources makes it hard to say that these people are wrong.

However, even though the present budget for law enforcement is nearly as great as the pre-war budget for the entire Division of Fish and Game the current expenditures for law enforcement cannot be materially increased without resulting in a curtailment of some other essential fish and game activity. Nevertheless, while the need for maintaining proper relationship between the amount of money allotted for various fish and game activities will always be present, the Department is making and will continue to make every effort to improve its law enforcement program and to make it better equipped to meet the problems confronting it.

The principal items which account for the present budget for the Bureau of Law Enforcement are:

1. SALARIES: In 1942 the entrance salary for Game Protector was $1,200. Today it is $2,771 as the result of six cost-of-living increases granted for this and other State positions during the past ten years. Since April 1, 1945 the personal service budget for law enforcement has increased from $368,910 to $676,786, an increase of $307,876, or 83.4 per cent.

2. TRAVEL: Game Protectors are required to provide their own cars, for the use of which they are reimbursed on a mileage basis for travel while on official business. To provide for better coverage of their territories, the monthly travel allotment has been increased from an average of $50 to an average of $100 per man. The law enforcement travel budget on April 1, 1945 was $101,117. Today it is $247,620, an increase of $146,543 or 145 per cent.

These items, plus new and replacement uniforms, communication expense, new boats (plus operators employed on a seasonal basis), additions and replacements in other equipment all add up to a current law enforcement budget of $1,013,157, a $522,948, or a 106.6 per cent increase since April '45.

It is evident, then, that to provide an enlarged program for the protection of our fish and game resources and to keep pace with inflation, the people of the State have a whopping investment in fish and game law enforcement. We believe that with a simpler and clearer law to enforce, we'll get a much better return on our investment.

—WILLIAM E. TINNEY

facts on

FIRES

Q. *Is there organized fire protection throughout the entire area of New York State?*

A. Yes. The forest area amounts to about 14,000,000 acres, and of that area the Conservation Department is responsible for forest fire control on about 13,000,000 acres. Town supervisors are responsible for protecting the balance.

Q. *Does the State maintain field men to suppress forest fires?*

A. Yes indeed. Functioning under 15 District Rangers there are 100 Forest Fire Observers who report fires as soon as smoke is visible, and 125 Forest Rangers who, with about 4,000 Fire Wardens, supervise the actual suppression measures.

Q. *How are men and equipment secured to fight forest fires?*

A. Forest Rangers, Fire Wardens and other employees responsible for the suppression of forest fires have the right under law to call out any able bodied man more than 16 years of age to aid in fighting fire. Usually, however, persons residing in the immediate vicinity of the fire are working on it before the Ranger or Warden arrives.

The Bureau of Forest Fire Control operates more than 150 vehicles of various types; trucks (45 of them being tank trucks), jeeps, etc., and many other pieces of mechanized equipment suitable for fire fighting—such as tractors, plows, power saws, and portable power pumps. In addition many thousand pieces of hand equipment (such as back pack pumps, shovels, axes, fire rakes, and mattocks) are distributed with the Forest Rangers and Fire Wardens located in strategic areas.

Most of the fires which start are controlled by the use of Department owned equipment, and in many cases by Department personnel only. Frequently a few temporary fire fighters are employed.

However, it is recognized that under extreme situations such as might occur if one or more large fires started in the remote blow-down areas in the Adirondacks, much more man power and equipment than the Department could have quickly available might be required. For this reason various organizations such as lumber companies, town and county highway departments, volunteer fire companies, hotels and clubs have been canvassed and their suitable equipment and man power listed in such a manner that it can be called immediately by the fire dispatcher in any district. The individuals and organizations co-operating in this "pool" deserve great praise.

Q. *Is specialized training necessary to fight forest fires?*

A. Only for supervisory personnel—the Forest Rangers and Fire Wardens in charge of the fire fighting crews.

Q. *Are there many forest fires annually in this State?*

A. During the last few years there has been a gradual reduction in the annual number of fires. The total has dropped from a high of 2,700 fires to about 1,500 a year.

Q. *What causes most of our forest fires?*

A. Carelessness in some form. Smokers cause about four fires out of 10, while failure to use caution in burning debris, improper care in building camp fires (and leaving them while still burning) cause nearly as many fires as do smokers.

Q. *Is lightning a problem?*

A. Yes. Particularly in the higher mountainous areas of the Adirondacks, lightning fires are frequently reported. Although the number is small, such fires are often located in remote areas and frequently burn deeply into the ground. We anticipate that the number of lightning fires in the blow-down will increase because of solitary trees standing like lightning rods in the midst of down timber.

Q. *How serious is the situation created by the blow-down?*

A. The storm in November, 1950 converted the trees on thousands of acres of Adirondack land into a mass of highly inflammable material, so tangled that access in many uncleared areas is virtually impossible. In short, we have a fire hazard unequalled in the history of New York State.

Q. *When danger of fire is acute, can the Conservation Department "close the woods?"*

A. No. The Department may recommend such action, but the woods can be closed only by proclamation of the Governor. There is an exception, however. The Department

may, by regulation, "close" any State-owned lands whenever it determines that a serious fire hazard exists thereon. With consent of the owner this regulation may include private land. It is under this authority that extensive blow-down areas of the Forest Preserve are now closed.

Q. *How does the Department determine when conditions are serious enough to recommend closing?*

A. The Department receives reports from 15 strategically located stations concerning daily changes in several factors having a direct influence on fire behavior—such as wind velocities, precipitation and the per cent of moisture in vegetation. There is a point where the cumulative influence of a drought (as indicated by these factors) creates conditions such that a fire, once started, will literally explode. As that point is reached, recommendation for woods closure is made. Because closing the woods is a serious measure, having far-reaching effects, the final determination to make recommendations of that sort is based on long-term forecasts by the U. S. Weather Bureau.

Q. *When are forest fires most likely to occur?*

A. They may occur at any time when there is no snow on the ground. They occur most frequently in fall and spring.

Q. *Why?*

A. Because during these seasons vegetation is often tinder dry; it not only ignites readily, but a fire once started spreads rapidly under the influence of the strong winds that are common during these seasons.

Q. *How fast can a forest fire spread?*

A. Usually the rate is rather slow, but there are exceptions: a forest fire during the mid '30s jumped Lake Sanford near Tahawus and in less than one hour had reached the top of North River Mountain—nearly five miles distant.

Q. *What caused that fire to spread so rapidly?*

A. It burned in dried out slash, and a near gale-force wind swept the flame up the slopes of the mountain to its summit, where the fire stopped running.

Q. *I have heard of crown fires, surface and ground fires. How do they differ?*

A. In each case the term is descriptive. Surface fires are most common; they burn only on the surface of the ground. Crown fires are those that roar through the tops of trees, throwing burning pieces of bark and small limbs a quarter of a mile or more in advance to start new fires. In 1949 charred pieces of bark fell more than 10 miles away from a large fire in the northern Adirondacks. Ground fires are those that burn deeply into the soil, consuming the organic material.

Q. *What kind of fire is the most destructive?*

A. The ground fire, particularly when associated with surface and crown fires. Alone, ground fires may burn down to basic rock, but the area covered is small. When associated with crown fires, however, all of the soil and vegetation may be consumed over thousands of acres. Examples of this type of destruction are evident around Cascade Lakes and Chapel Pond in the Adirondacks.

Q. *Have recent forest fires been equally destructive?*

A. On very small areas, yes. On extensive areas, no. Nowadays, most of our forest fires are extinguished while they are still small. But we've been lucky in the blow-down, and we keep our fingers crossed this fall.

Q. *What should I do if I find a fire burning in the woods and am alone?*

A. If possible, put it out; if the fire is small it may be beaten out with a handful of brush. But if it is too large for you to handle alone, do *not waste time trying to fight it.* Hurry to the nearest telephone and ask Central to whom you should report a forest fire. Possibly a Forest Fire Observer has already reported the fire and a Ranger or Warden is already on his way to it, but phone anyway.

Q. *What tools are valuable in fighting a grass or brush fire around my home?*

A. If water is available, anything that can get it to the fire is valuable. But the most universally used tool is probably a shovel. With it you may throw soil onto the fire, thus cooling it off, or a shovel may be used for scraping inflammable material from the edge of the fire, thus permitting the fire to burn itself out.

Q. *What measures are used by Forest Rangers to extinguish forest fires?*

A. Each fire is an individual problem. Water discharged through light portable pumps is used to cool down the flames; fire rakes, heavy brooms, shovels, mattocks and other digging tools are used to create a fire line across the front of a fire and around its sides, thus depriving the spreading flames of essential fuel. Frequently the fire line or barrier is made with a tractor and plow or bulldozer. Efforts are concentrated on preventing the fire from crossing this barrier.

Q. *I have read recently of a Forest Fire Compact. What is it?*

A. It is an agreement signed by New York and the New England States under the terms of which each state will assist any other member state, upon request, in the suppression of large forest fires. The Compact was developed in 1949. During the past summer New York State and the province of New Brunswick sent fire fighting equipment to Maine when, as a result of many large fires, additional equipment was needed in that state.

Q. *Suppose I start a fire to burn brush or for some other purpose, and it escapes control; what is my responsibility?*

A. You are in trouble. You are liable for the entire cost of extinguishing the fire, and you may be sued for the damage caused by the fire. And there may be a penalty in addition of not to exceed $100.

So be careful. The best way to stop forest fires is to stop them from starting. —K. F. WILLIAMS

Fall Movements of Adirondack Deer

FOR nine years now, we have been operating deer checking stations at various points around the State to collect facts and figures on the condition of the deer killed, the herd they came from, and the range they lived on. This information has been very important to us in providing some of the vital statistics necessary for good deer management. Those of you hunters who have stopped at our checking stations are familiar with all this.

But you also know that whenever time and opportunity allow there are a lot of bull sessions at these checking stations about deer hunting in general. In the past few years in particular, we who operate Adirondack checking stations have made a point of asking hunters *where they found their deer.* And the answers to these questions have convinced us that a greater knowledge of the movements of Adirondack deer within their local range, particularly during the hunting season, would result in a great many more successful hunts. You would be surprised (we were, anyway) at the number of hunters that hunt the same way, in the same place, year after year without regard to the various conditions which affect the movements of deer within their range. You would be surprised too at the false conclusions which many of these hunters jump at when their rule-of-thumb for finding deer doesn't pay off.

"Come up after the first of November. By then the breeding season will be on, the weather will be cold, there will probably be snow on the ground, and the bucks will have come down out of the hills to breed the does. You won't have to do so much climbing to get your buck."

Have you heard that before? That seems to be the rule-of-thumb of many deer hunters. And have you heard the "explanations" that are circulated when this rule fails? Have you heard about the "shortage of bucks" during the deer seasons of 1948, 1949 and 1950? Did you hear that in 1948 and 1950 there were very few does bred during the hunting season because of the warm weather? Maybe you didn't hear all this, but we at the checking stations did.

It was the reported "buck shortage" during the fall of 1948 that really brought things to a head. It is true that thousands of deer died during the winter of 1947-48 because there were too many animals for the amount of available winter food. But this loss was not so complete as to cause the great shortage announced by hunters. That was the hunting season, if you recall, when so much good deer meat spoiled because of the hot weather. It was also one of those falls when there seemed to be very few "buck rubs" on small trees, and this reinforced the belief that there was a shortage of bucks and that something was wrong with the normal rutting season.

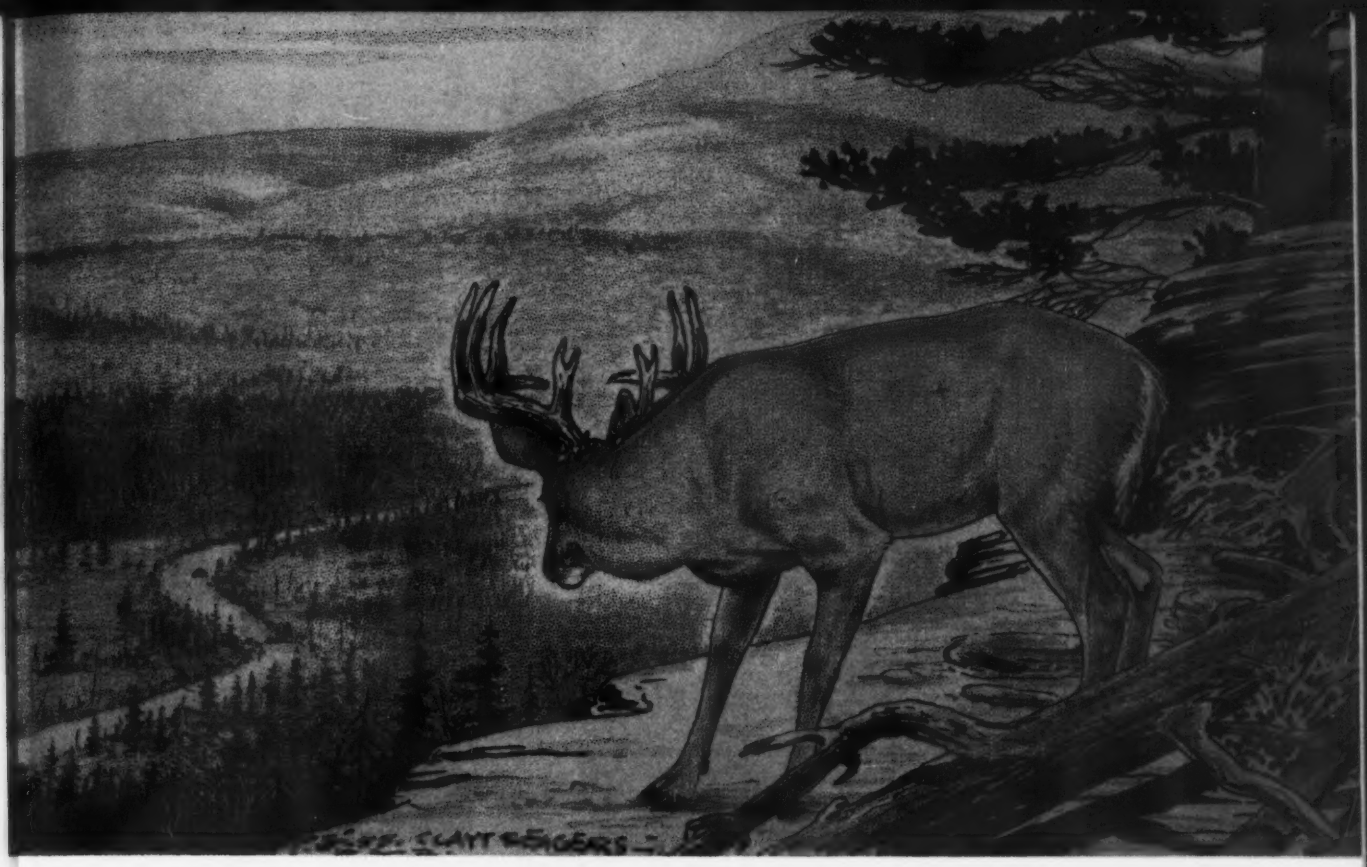
Actually, nothing was unusual (except the weather) and nothing wrong. As to the comparative absence of buck rubs, our opinion is that in hot weather a buck doesn't bother with such exercise. As to the breeding season, the generally accepted peak in mid-November is true and our records, secured between 1936 and 1947 inclusive, show that among 100 adult does bred in the Adirondacks, 9 were bred before November 9, 58 between November 10 and November 23, 21 between November 24 and December 7, 7 between December 8 and December 21, and 5 between December 22 and mid-January. These records correspond almost identically with those from New Jersey, West Virginia, Pennsylvania and western New York. The most recent studies of the breeding season of deer have shown that shifts of the breeding season conform with latitudinal differences and that the breeding season in south Texas is only about a month later (December 15 to January 3) than that of northern United States. The most positive information on the influence of light intensity has resulted from shifting deer from the southern hemisphere (New Zealand) to the northern hemisphere (England) and vice versa. Deer which normally breed in April in New Zealand bred in October in England, and when returned to New Zealand their breeding season again shifted to April. So it would seem that changes in weather do not have much influence over the period of breeding activity and that regardless of weather conditions the breeding seasons seem to occur at about the same period of the year in areas with approximately the same latitude.

But another part of the thumb rule is less sure: "Come up after the first of November. The weather's cold, there may be snow on the ground." These conditions apply about half the time for Adirondack hunting seasons. Of the past seven falls, three could be called warm, one cold, and three about average. Figures show that slightly more than half of the time there is a tracking snow in the Adirondacks by early November.

And then we come to the most commonly accepted phrase of this rule-of-thumb: "The bucks will have come down out of the hills to breed the does and you won't have to do so much climbing to get your buck." The rule is way off here. The "shortage of bucks" that was reported during the season of 1948 can be largely attributed to the fact that the temperature throughout the season was eight degrees above normal (32.6°). There were only 18 nights during November when the temperature dropped below freezing, and daytime temperatures between 60° and 70° were common with 75° temperatures reported for several days. As a result, both bucks and does stayed on high ground throughout the season. Of all the hunters we questioned at the checking stations, not one got his buck on the low slopes or in the evergreen valleys. Evidently, the hunters who believe that the bucks (and other deer) move down to the lowlands in November got fooled; they found deer virtually absent from their "usual" November haunts.

During the 1951 season most of the deer stayed in the higher elevations and in the hardwoods until the last few days of the season. Even the heavy snow that fell during the first four days in November did not materially change their movements. It was apparent that during the short period of low temperatures that accompanied this snow, the deer stuck it out in the uplands, and the warm weather that returned after a few days again produced comfortable living conditions in the higher elevations. This permitted the deer to stay at these elevations until the tail end of the season.

As a matter of fact, the last year that deer really came down out of the higher elevations during the hunting season was in the latter half of the 1947 season. That year daytime temperatures were close to freezing and night temperatures were in the low 20°'s or below. This long period of cold temperatures, accompanied by raw winds, brought the deer down—and the rule-of-thumb worked perfectly. But since then (if you accept the "rule" that the does are down low in the fall and the bucks up high) the does must have gone uphill



to be bred. Such a separation of the sexes is not characteristic of the white-tailed deer, although deer that are hunted and are experienced in the ways of the world seem to make themselves hard to find during the hunting season.

The influence of the combination of cold temperatures and raw winds on deer movements can best be seen in the winter and early spring. When there are a few warm or hot days during this period, deer frequently concentrate on sunny southern slopes. But when the temperature drops and a cold wind moves in, the deer move toward any type of shelter that affords protection—a hillside in the lee of the wind, a coniferous valley, a dense swamp.

In addition, there are two factors which influence the movements of deer only during the fall season. The first of these is the lack or abundance of mast (acorns or beechnuts) or other seasonal foods (apples, for example). Deer will travel long distances from their normal home environment in order to reach such an abundance of food. Most of these movements are made at night, deer sometimes traveling as much as five or six miles. When morning comes, a hunter finds extensive deer signs in these food areas and may conclude that the deer are near at hand. Actually, they probably have come and gone—come from their home range during the night, and gone back to it at daybreak.

In an undisturbed environment, deer probably feed at any time of day or night, depending upon weather, appetite, abundance and availability of food. But normally, and particularly during the hunting season, deer do most of their feeding from dusk to dawn and spend the daylight hours resting, either in dense cover or on some slope where the weather conditions suit them and where they are placed to good advantage with regard to sight and scent. Experienced deer hunters, however, know that abnormal weather may force a change in this schedule: a succession of stormy nights often causes deer to feed in the daytime, while the approach of a heavy storm (which many believe is detected by a sort of sixth sense in both birds and animals) may effect the same change. In any case, good deer hunters study not only the feeding habits of local deer, but the influence of the weather upon them.

Another factor is hunting pressure. Where pressure is heavy, deer are driven into the more inaccessible areas—either high mountain tops or regions of dense cover such as now afforded by the extensive blow-down areas in the Adirondacks. Only those who have hunted such dense or inaccessible areas realize how difficult it is to move deer out of such a place. Not only bucks, but does and fawns too will let a hunter pass within a few feet in such cover.

With this background of observations, it seems that the Adirondack buck hunter could improve his chances of getting a buck if he would give a little more thought to the habits of deer under varying weather conditions and do less hunting by rule-of-thumb. The rutting season and the advent of November do not cause deer to leave the higher elevations and head for the lower coniferous slopes and valleys. On the other hand, continuous cold temperatures and raw winds do start the movement to lower elevations and evergreen shelter. But if average Adirondack weather prevails, deer will not leave their summer and fall ranges until late December or early January, at which time they will move into the ten to twelve per cent of the total range that affords adequate shelter during the winter.

—C. W. Severinghaus

about Otter Trapping

OUR guess is that the otter (who gets a big kick out of life anyway) is enjoying a couple of extra laughs at the expense of the present day trapper—who just doesn't seem to be able to catch up with the present day otter.

For nine years prior to 1945, we had no open season on otter. During this period of protection what was originally a fairly small otter population, restricted to the Adirondacks and Catskills, multiplied rapidly and extended its range into counties where nobody had seen them for a generation or more. So we had restricted open seasons in 1945 and 1946, but that didn't seem to dent the otter population. In later years, more generous seasons were proclaimed—and the otter population did better than ever. Last year, with no limit on the numbers which could be taken, only 127 were taken in the entire State by a sum total of only 96 trappers. At least that's what our records show.

Although fur prices are down, it still pays to trap otter if you know how to do it. Besides, there are plenty of pond and lake owners who would trap them regardless of price (again, if they knew how to do it) just because of their fear that the otter are catching fish that the owners want to reserve for themselves. So there has been no lack of incentive for otter trapping. Still, few otter are trapped.

Why are otter so hard to trap? There's no easy answer for this one, but here are some thoughts and suggestions that may be of help to those who have an otter problem, or to those who would simply like to try to trap an otter, or to those who want to pick up a few extra dollars. Whatever the reason, there's no doubt that at the moment, as far as conservation is concerned, New York's otter population could stand more and better trapping than it's now subjected to.

The first difficulty in trapping otter is the character of the animal itself. He is extremely man-shy and trap-shy. He is also a great traveler and when his usual haunts are disturbed he is likely to take off for parts unknown and not return for at least several days. This characteristic, as well as other habits, was well known to the old time otter trapper, who would often prepare the sets or locations for his traps long before the actual trapping season opened. And incidentally, the passing of the old time otter trapper is another big reason why the take nowadays is so small.

But the old-timer also had an advantage that we don't have now. He could use a trap with blunt teeth on the jaws, whereas the law of today says we can only use a smooth-jawed trap with not more than a 6-inch spread—from which many otter are able to escape. This is because their muscles are hard and their legs and feet taper toward their toes, so if an otter can get into shallow water or out onto the bank where he can brace himself against the trap, his chances of breaking out are very good. He may be maimed—but he gets away wiser than ever. The lesson here is that you ought to weight or otherwise rig your trap so that the animal drowns as quickly as possible wherever the water is deep enough, or so that he can't get out on the bank to fight the trap.

Another trouble is this: Otter have the habit of sliding along with their front feet folded back, so they often spring a trap with their chests rather than their feet. To avoid this, the trap has to be set in such a way as to make the otter put his front feet down as he moves onto the trap. This can be done in several ways; sharpened sticks stuck in the mud on both sides of the trap at about a 45° angle is one way; a set beyond two rocks that make a passageway too narrow for an otter to slide through (so he has to walk through it) is another way. Often there are logs, roots, sticks or rocks in a stream that are just right, so you can set a trap without any of these preparations. Such natural locations are the best.

Breaks in old beaver dams are good places to set, although you will notice that some otter seldom go through these breaks but usually go around the end of the dam. These are the fellows that probably have been nipped a time or two in such places.

Small brooks that have open places in them are good, especially after the snow gets deep. Sets should be made in them so they can be looked at from a distance; as a matter of fact, this goes for all otter sets, especially when the ground is soft or when there is snow. Otter become extra suspicious at any human sign. Just the same, although they will usually leave a place if you track around too much, they generally come back in a few days or so.

THERE is one thing you can be sure of in otter trapping: If there's going to be any luck, the otter will have it. It's not too difficult to catch the young of the year, but with a little experience an otter gets so wise to the ways of traps and trappers that I don't think we have to worry about their survival.

—Ed. Maunton

opinion:

SOME THOUGHTS ON GAME RESEARCH

THOSE who work in the Conservation Department often have reason to believe that one of its most useful functions is to serve as a "whipping boy" when sportsmen fail to find the abundance of fish and game that they envision. And, because it is the least understood of the Department's activities, research is frequently singled out for especial criticism.

First as a field investigator and later as supervisor of game research, the writer has participated in the development of New York's game research program over the past twenty years. It seems worthwhile to review briefly what has been accomplished and to offer some thoughts regarding the future.

As a distinct activity of the Department's Division of Fish and Game, research on game problems began with the initiation of the ruffed grouse investigation in 1930. It was soon expanded, however, to include studies concerning other game species, notably pheasants, deer and waterfowl. Then in 1939 it received a real boost through participation in the Pittman-Robertson Federal Aid program and the scope of its work was still further broadened. This has continued.

In 1930 game research was a young science, not only in New York but elsewhere in the country as well. Those concerned with wildlife conservation were beginning to recognize that there is more to sound game management than legislation, artificial propagation and predator control. Moreover, the realization was crystallizing that proper management must rest on a basis of factual data and that there existed a decided lack of such data. The rise of game research was an outgrowth of this need.

That the ruffed grouse investigation was the first major study in New York resulted from alarm for the future of the species following the severe scarcity that occurred in 1927. Then concern for deer in the Adirondacks arose from the heavy winter losses of 1930-31 and a study of this problem was undertaken. A rapidly increasing demand for pheasant hunting and the continent-wide decline of the mid-1930's in waterfowl abundance led to research regarding these species. And so it went. Some work has been done on all of the principal game species.

The choice of specific subjects for study has been governed chiefly by the need for practical answers to the problems of those charged with the responsibility of creating and maintaining as great an abundance of game as possible and compatible with other interests. Nevertheless, it has often been necessary to do considerable life history research to obtain information prerequisite to solving more "practical" problems. In fact, the intensive work of this kind carried on with respect to grouse produced knowledge concerning the basic principles of the behavior and interrelationships of wildlife populations that has aided greatly in the study of other species. Then, too, it has frequently been necessary to do research just to devise techniques which can be used to obtain needed data. Ultimately, however, game research from the standpoint of the Conservation Department serves to test and evaluate management practices suggested to meet various needs.

Perhaps the paramount game management principle which has come from the research done in this State and elsewhere is that the quality of the habitat is the cornerstone upon which wildlife abundance fundamentally rests. Only by improving the habitat can average population levels be raised. Temporary concentrations are unstable in proportion to the degree to which they exceed the carrying capacity of the range. Making poor coverts good and good coverts better is the only sound way to improve hunting prospects.

Another fundamental concept is that, throughout the animal kingdom, the reproductive potential is usually high and substantial losses at all life periods are normal. Furthermore, fluctuations in abundance from time to time are inevitable. Good game management can be expected to minimize but not eliminate them.

Other significant conclusions include the facts that, since most species in their wild environment are relatively short-lived, the magnitude of the annual increment of young directly affects the crop available for hunting; that legal hunting is rarely an important limiting factor; that game populations in New York are, in general, free from serious disease conditions; that predator control is not a feasible means of fostering game abundance; that the effectiveness of stocking is inverse to the density of the resident wild population of the species involved; that in the control of overpopulations (deer for example) a reduction in the number of females is usually the most effective means.

Regarding the future, it is anticipated that effort will be directed more and more to the study of specific management problems and to evaluating various means of dealing with them. Moreover, an increasing amount of attention will be given to the vital job of putting the results of research into non-technical language and promoting an understanding of them on the part of sportsmen, landowners and other laymen on whose co-operation the success of wildlife conservation must ultimately depend.

—ROBERT W. DARROW

Old Corners—and Lot Lines

Survey marks of long ago revealed by cutting into the wood, and at right, hack marks and blaze almost obliterated but recognizable to the trained eye.

BACK in the fall of 1912 David C. Wood, Chief Land Surveyor for the Conservation Commission, was retracing a lot line in the Jerseyfield Patent in Herkimer County. I was running the compass. Our distance along the old blazed line ran out right in a small mud hole, so that is where we figured the corner and cross-line ought to be.

Dave said: "I've been here before; the corner should be right here somewhere." He peeled off his coat, rolled up his shirt sleeves, got down on one knee and began to feel around in that mud hole. In a moment he came up with the pointed butt-end of a hemlock post as fresh as the day it was cut, sharpened and driven into the mud. Only the part above ground had rotted away. The man is a wizard, I thought. But the fact is that he possessed a remarkable memory and uncanny powers of observation; he recognized the witness trees around that corner, each marked with a long blaze with three notches across it at stump-height, all of them focussing on that mud hole.

That was just 30 years ago. Dave Wood is dead, but some of us in the Conservation Department are still doing the same kind of work, still trying to find old corners, retrace old lot lines. In fact the Department keeps three survey crews busy the year 'round, and we could use at least a couple more just to keep abreast of the work that needs to be done. We have special jobs where our services are required, such as cases of trespass on State land, but most of our time is spent in resurveying the boundaries of the Forest Preserve.

In the administration of the Forest Preserve it is obvious that the boundary lines of the State's lands should be definite and plainly marked upon the ground. But many of these boundary lines in the Adirondacks were first laid down by surveys made a hundred or more years ago (some as early as 1760), and in the Catskill region even earlier surveys were made.

Nevertheless, the courts have consistently held that these original surveys constitute the true boundaries of property, and the first conveyances of lands were made in accord with them. Such surveys were made with crude instruments—open-sight compass mounted upon a "Jacob staff," or sometimes just a straight stick stuck in the ground. Drag-chain methods of measuring distances were employed, while slope measurements were crudely corrected to the horizontal by allowing so many links per chain according to the degree of slope.

These first surveys were made in what

was virtually an uninhabited virgin wilderness, and the survey parties almost invariably "lodged" where night fall forced the end of the day's run of perhaps three to five miles, depending upon the terrain.

In retracing these boundary lines the modern forest surveyor must put himself in the position of the original surveyor, and using copies of his predecessor's original field notes and maps (if obtainable) search out, identify and retrace his lines. This requires an ability that can be acquired only by actual experience in the woods, an ability to recognize the old blazes the original surveyor made upon the trees along his lines, and the appearance of the bark-scars—which vary according to age and species of trees marked, as well as their rate of growth.

Blazes made on trees 150 years ago of course look different from those a mere 50 years or so old, and those on spruce, hemlock, ash, beech, birch or maple trees all vary considerably in appearance. Trees also vary in their rate of growth according to their situation and the condition of the stand, and this again affects the appearance of the blaze-scars.

As everyone knows, trees grow in diameter by adding annually a new ring (or more properly a new shirt!) over the old core. A fresh blaze, usually made at breast-height upon the trunk, if cut through the bark, will close over in 10 to 15 years, leaving merely a recognizable scar, but the edges of it will still show the smooth cut of the marking axe. Surveyors blaze opposite sides of a line-tree, and the old fellows usually marked their line-trees (trees right on the line, sometimes referred to as "compass trees"), by a blaze plus a combination of hacks above or below the blaze. Lawrence Vrooman, for example, who was very active from about 1790 to 1820 in the southern Adirondack region, invariably marked his line-trees with a blaze and three hacks below. I have found hundreds of them, and the photo shown here is of one of them that I boxed out in 1941. It was 131 years old. The Woodworths—grandfather, father and son—all marked with a blaze and two hacks above and below it. Such distinctive marking served the dual purpose of distinguishing one surveyor's lines from another's, and determining the trees actually on line; all other trees near the line were marked three sides, or just side-marked, or marked quartering towards the line.

With experience, the forest surveyor learns to distinguish such survey blazes from other scars due to bruises, healed-over woodpecker holes, blazed trails, log roads or trap lines.

To determine the age of an old survey blaze and thereby identify the line being retraced, the blaze is "boxed-out"; that is, a notch is cut through the blaze and deep enough into the tree so as to strike across the middle of the old blaze. Then the number of rings of annual growth are carefully counted from the edge of the old blaze within to the bark. This usually proves the age of the blaze within a year or two, although sometimes heart-rot and "shake" prevent an accurate count. And sometimes the grain is too fine for accurate counting, or a few fake rings may be present. A good surveyor must carefully sift all evidence.

Where more than one line is found, it becomes the surveyor's duty to discover and re-establish the original line, if possible, ignoring all others as erroneous. An exception to this rule is the case of an authentic boundary line agreement in which adjoining owners have bound themselves and their successors to recognize a certain fixed line, identifiable upon the ground, as their common boundary and have properly drawn up and recorded this intention in writing. Incidentally, this is the best procedure in all cases of disputed boundaries, and avoids costly and unnecessary litigation.

In retracing an old line, the difference between True and Magnetic North must be considered. This difference, known as *variation* or *secular change*, has varied eight degrees or more over a period of years. In New York State, generally speaking, the annual change amounts to only a minute or two at present. The "swing" seems to have stopped about ten years ago, and the declination of the needle from true north, though still west, is now starting to decrease at a slowly accelerating rate per annum. There is also a daily change amounting to several minutes each twenty-four hours, but this is usually neglected and considered compensating during a day's work. Secular change tables published by the U. S. Coast &

Geodetic Survey give the secular change data from 1750 to the present time for each two degrees of latitude and longitude in the United States. These tables help the surveyor assume a trial compass bearing to use in retracing an old line, but this will be subject to correction as the survey proceeds, and the evidence discovered will control and determine the bearing of the final line re-established.

In any case, whenever feasible the survey should be tied to the true meridian by any means available. The re-marking of a line and the setting of permanent corners completes the re-survey, and finally, the painting of the blazed line will make it plain to see and will obviate the necessity of a re-survey for many years. At present the Department is using a good grade of bright yellow paint for this job; it is very effective, and the lines easy to follow. Furthermore, they make good hunting trails, although survey lines (and hence surveyors) very often go where no person in his right mind would go if he could avoid it.

Lost or obliterated corners are re-established at the intersection of the lines as they are correctly restored. The old surveyors frequently blazed and scribe-marked the tree standing closest to the point of intersection. Those with a higher regard for accuracy would set a stake of durable green wood in the center of a pile of stones and then "witness" the trees in a circle around it with a blaze and/or hacks facing towards the corner. These stone piles remain long after the stake or post has rotted away. I have sometimes found the hole a stake was in by removing the debris and carefully feeling over the ground within the circle of witness trees.

A corner found may or may not be correctly located, and must be proved-up by retracing the true lines to their intersection. If reasonably close to its proper position it should be adopted, rebuilt and re-referenced. It is unethical and arbitrary to disregard an old corner; all the circumstances must be considered in the light of the best evidence for its location. When several corners are found within a few feet of each other, as occasionally happens, the one that best satisfies the conditions should be renewed.

The surveyor's judgement is continually called into play in determining the correct location of a boundary. The old "original" line trees are becoming more and more scarce as the years pass, although line trees are the property of both adjoining owners and cutting them is bad practice. They are each and every one a monument of the true location of the line, and the law says the defacing or destroying of a monument of a boundary line is a misdemeanor. Yet there have been cases in which the complete obliteration of a boundary line has been accomplished with malice aforethought.

At times, surveyors themselves are guilty of destroying evidence of a boundary line. You can't run a line through the woods without cutting an occasional tree, but usually you can get a long clear shot of twenty rods or more by cutting off limbs, removing a few saplings and "slabbing" a tree the edge of which is just on line. When your line-of-sight, however, strikes right into the middle of a large tree bearing an original blaze and perhaps several old corroborative re-markings, that tree should not be sacrificed and the evidence destroyed merely to facilitate matters. It is a simple matter to turn off or put in an offset to get past that tree, and then get back on line again.

Setting up over a transit station is often a tricky job, and the "set-ups" must be chosen with care. On soft ground it is frequently necessary to drive three stakes, one to support each of the three tripod legs. When the wind is blowing, one tripod leg on the root of a swaying tree will render the set-up practically useless. On the brink of a cliff a transit man scarcely has room to set-up and move around his instrument. I once had a set-up on top of a large boulder near the top of a mountain. My weight was just enough to upset that rock and I jumped clear as it crashed down the slope. On another occasion I made a set-up over a copper-bolt in a huge boulder on top of Ft. Noble Mountain and couldn't imagine why the transit wouldn't stay levelled-up—until I discovered I was set-up on a "rocking stone."

Obstacles to surveying are many and varied. In the woods the boundary line surveyor encounters ledges, perpendicular and otherwise, large boulders, dense thickets, upturned roots, large old stubs, gorges, deep streams and wide rivers, quaking bogs and quicksands, swamps and beaver flows full of muck, dead trees and alders—all of which make a direct measurement or a clear "sight" impossible, but all of which must be negotiated somehow. Most of such difficulties are solved by offsets, triangles or stake shots, involving the solution of simple problems in plane trigonometry. Needless to say, the blow-down of Nov. 25, 1950 seriously aggravated our conditions.

Some of the field books kept by the old surveyors contain interesting observations. In 1785 Arch Campbell and his son John surveyed Bergen's Creek, near the Sacandaga River above Northville. On the south line, when the party reached the Sacandaga River on Nov. 23, the record states "at 72 (chains) got to the river side; made a raft and got all across by wading part of the way through the ice." On Sunday, Nov. 27, John says:—"Went looking after the man who was lost who had the provisions." In surveying Adjatis Tract in 1794, Bing Wright in a foreword in his field book states that "moose and bear are plentiful but deer are very scarce." Although no mention is made of them, I would imagine that wild bees and hornets were as common then as now—and as hostile to surveyors.

I recall a transit set-up I made a few years ago within a foot of a hollow maple stub which was full of bees. My crew got them excited in establishing the station and it was fully twenty minutes before they quieted down. Believe me, I used extreme caution not to antagonize them while turning the angles at that station with those angry bees buzzing around my head and crawling on my face and hands. Ground bees, "yellow-jackets," and white-faced hornets are just as bad tempered if disturbed. Black flies, deer flies and mosquitoes are aggravating pests, too, at certain times of the year.

The restoration of obliterated boundary lines in the Forest Preserve demands peculiar qualifications. Men engaged in this kind of work do not punch a timeclock or get home every night in the week in time to change their wet socks before supper. In fact they're lucky if they get back to their wives and families (if any) to spend Saturday and Sunday. And on those days, they have to catch up on their reports and correspondence.

—A. H. King,
Forest Surveyor

Forest Surveyor Al. King has been working for the Department for 41 years. He and Al. Davis carry most of the surveying load in the Adirondacks, with Davis taking the northern section and King the southern.

Although King has done some surveying work in the Catskills, most of his professional life has been spent in finding "old corners and lot lines" in the southern Adirondacks, and he undoubtedly knows more about them than any man alive. His address is just Speculator, New York, and he continues to work out of his headquarters there with as much vigor and proficiency as ever.

DUTCHESS COUNTY

DUTCHESS is a beautiful county of rolling hills and green valleys. The fact that it is the link between the metropolitan area to the south and the hill-farm country to the north is expressed in the rich farm lands, interspersed with country estates, that make a mixture typical of this county.

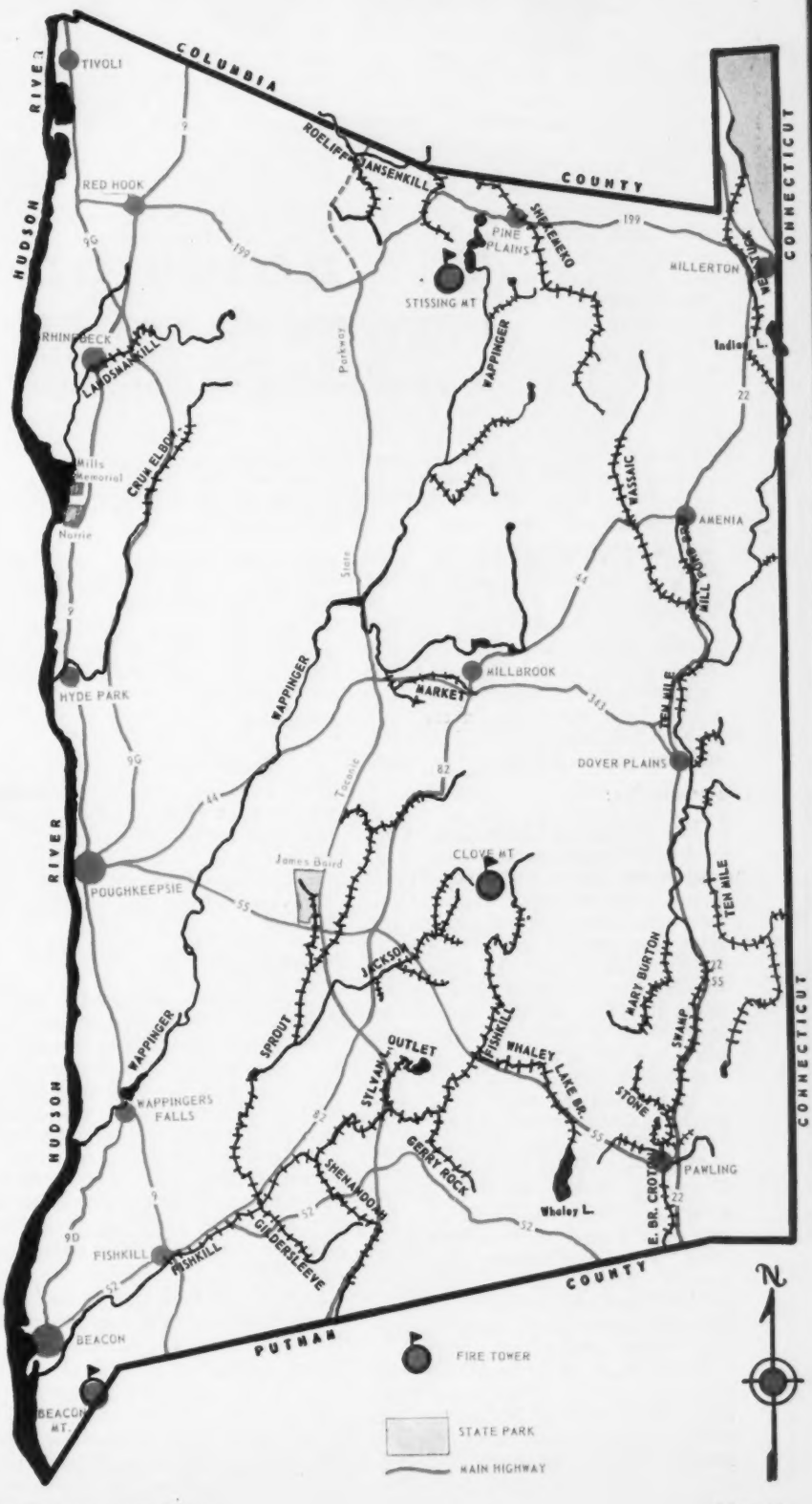
Farther removed from New York City than the counties to the south (Putnam and Westchester), Dutchess is nevertheless subject to more or less the same influences as far as hunting pressure and game populations are concerned; hunting pressure has resulted in extensive posting, and extensive posting (coupled with local land use practices) has resulted in excessive populations of some game species, particularly deer. With regard to deer, it appears that the situation is reaching the critical point where a decision must soon be made as to whether the population should be permitted to build up, or control measures should be employed to protect local economic interests.

Dutchess County is organized as a Soil Conservation District, and many of the landowners have signed up with the Department's PR-48-D program, aimed at improving cover for game and providing more marshes and ponds for wildlife. And last spring co-operators under the Department's Forest Practice Act received (free) and planted 318,000 trees from our nurseries.

As to fish, the map shows more than words; waters stocked by the State (and hence open to public fishing) are indicated by crosslines. A total of 68,234 trout were stocked in the county in 1951: 52,179 brown trout, 2,700 rainbows and 13,355 brook trout. (A special fish management program in co-operation with Connecticut is in effect for seasons, creel limits, etc. in Indian Pond—which lies in both states.)

The Hudson River, in the section that describes the western boundary of the county, produces a lot of shad by the drift-net method in the northern section, by the stake-net method in the southern. No license is required by anglers in this section of the Hudson—where the water is fresh enough for the City of Poughkeepsie to use it.

—FRED EVERETT



notes on BEARS

Tracks shown in color are life-size for average adult for front foot (above) and hind foot (on opposite page). Rear portion of hind foot seldom shows in track

NEW YORKERS are fortunate in having plenty of black bears in their State, not only to see but to hunt. No finer hunting grounds for this species can be found in the United States than the Adirondack and Catskill regions (see map). Bears are making a comeback in New York, and there are indications that this will be a peak year for them.

Personality:

Few animals in North America appeal to the imagination or sense of adventure as does the American Black Bear, *Ursus americanum*. Next to monkeys and apes, bears are perhaps the most demonstrative of all animals. In addition to facial and bodily expressions, the bear has a voice. According to its mood, it whines, threatens or warns by loud snorts; it roars with rage; cries, bawls or howls in pain. An angry bear may scuff the ground with its paw and a cub may suddenly lunge at a passing person, emitting a "whooshing" noise.

A bear is near-sighted. In fact his eyesight is very poor but his wind is twice as good as a deer's. If you stand still, a bear won't see you. If he does, he may come toward you to bring you in focus. When that happens people get panicky, imagination and adrenaline run wild, and trouble begins. Usually bear and human run in opposite directions, hearts a-thumping.

Besides man, black bears avoid the cougar, the grizzly and the porky. They always seem well fed. No one has yet seen a starving bear, nor do we have any record of a bear dying of exposure. Perhaps that's why they've succeeded in existing for 30,000 years after lions and tigers disappeared from the Americas.

The black bear is cheerful, usually quiet, but very treacherous. Of all the bears in the world, a pet bear is the most dangerous.

Relatives:

The glacier bear is the blue-gray color phase of the black. Brown or cinnamon are also color phases. Litters of cubs have been found with brown, gray, as well as blacks. Only gray phase recorded in New York was on Feb. 22, 1946—one of three cubs found in the Catskills.

Travelling:

Bears tend to avoid open spaces. Ordinary line of travel is meandering. When pursued, however, a bear travels in a straight line over the roughest ground it can find. At dusk, a trailed bear will zig-zag unduly and double back (just like a fox) before it beds down, and may backtrack in its own footsteps better than a deer in snow, ending up on a ledge where it can watch its track. Bears rarely climb trees to escape; they prefer to make a stand or climb cliffs.

Bears are fond of walking on fallen logs, perhaps associating logs with food. They also like to walk on moss. George Buckley* of Gabriels (Franklin County) says a bear will go out of its way to walk on a patch of moss, and he used to cover the pans of his traps with large pieces of moss to attract the animals. Bears are easily trapped. Down right stupid, says George, just like a hog or cow—and chicken-hearted to boot. A bear caught by two toes will probably be found not too far off, sitting, moping and crying, whereas another animal would have escaped minus two toes.

For bear, Indians say the best bait is skunk cabbage. John Bulger* saw a bear nipping off the tops of skunk cabbage on Stony Brook, St. Lawrence County, in May, 1949.

Johnny Helems of Gabriels once tracked a bear up a ravine. The bear crossed on a 15-foot log 6 inches wide and never knocked off any of the 10 inches of snow capping the log. Really marvelous balance.

Swimming:

A bear has one dangerous trait; it will travel in a straight line when it is swimming. Moreover, it will crawl over any obstacle in its path, be it man, rock or log, and when it hits shore it will climb a cliff rather than deviate a few feet to a shallow bank. History reports many a bear killed by Indians who stood knee deep in water with tomahawk upraised, waiting for the bear to swim into range. Harding writes of twin Indians who went to kill a swimming bear and made the mistake of getting their canoe in front of him. The bear climbed in and the Indians fell out, drowning.

Dr. Ralph S. Palmer, State Zoologist, while canoeing on lower Mud Pond

* N.Y.S. Conservation Department employee.

Brook in Piscataquis Co., Me., on July 31, 1951, saw three bears swimming. They were a mother and two cubs, the mother in front and the cubs at 10-foot intervals behind. The mother was in mid-stream when she saw the canoe. She turned, swam back and waited for the cubs. The cubs hooked their paws in her rump and she towed them ashore. She did not change her course to avoid Palmer after heading for shore, but continued on the course set by her before she saw him.

Climbing:

George Buckley watched a bear which he released at Meacham Lake climb a tree. He and another fellow took the bear to Meacham in a cage, opened the door and quickly got into the cab of the truck. The bear got out of the cage, but wouldn't get off the truck, and lay on the cab facing forward. George started the truck, speeded a few feet, then slammed on the brakes. The bear went over the top, landed on the hood, then straddled the cab facing backwards with its body covering the windshield. After a few more jerks, the bear got off very angry. It stood 5 feet from a beech, then leaped and landed 5 feet up the tree and ran up. Its front legs were used for balance only; all the climbing was done with the hind legs which were brought forward under the belly, then extended fully behind. Hind feet were used like pistons. George said it went straight up 30 feet faster than he could run the distance on the ground, and he vowed then and there he'd never climb a tree to get away from a bear.

Other people have seen bears climb trees in a spiral fashion when the animals didn't know they were being watched. But apparently bears climb straight up when in a hurry and climb trees on the uphill side, or concave side if the tree is bent when they are not in a hurry to get to the top.

In feeding on beechnuts, bears will avoid climbing trees under 12 inches in diameter. They select older trees which are easier to climb and which probably have more nuts on them anyway. Old claw marks can be seen on many large beech in good bear country.

Niles Fairbairn* of Margaretville once found a bear about 40 feet up a beech feeding on beechnuts. The bear saw Niles and jumped out of the tree, landing on its rump and hind legs, and ran away unhurt.

About 1936, A. T. Shorey* and a C.C.C. foreman were rounding a bend on the Indian Head trail when they heard a loud humming noise. Looking up, they saw a bear in a basswood snag pawing its ears and licking honey from its paws. The bear saw the men and jumped 25 feet to the ground, then mounted a boulder about 50 feet away. Here the bear stopped, looked at the men, then back at the tree. Shorey and his friend turned to the tree and saw two cubs backing down it. The she-bear waited for the cubs, slapped them on the rumps and all three entered the woods.

Feeding:

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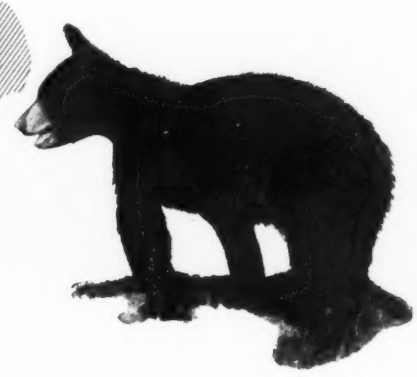
notes on BEARS



Tracks shown in color are life-size for average adult for front foot (above) and hind foot (on opposite page). Rear portion of hind foot seldom shows in track

NEW YORKERS are fortunate in having plenty of black bears in their State, not only to see but to hunt. No finer hunting grounds for this species can be found in the United States than the Adirondack and Catskill regions (see map). Bears are making a comeback in New York, and there are indications that this will be a peak year for them.

Personality:

Few animals in North America appeal to the imagination or sense of adventure as does the American Black Bear, *Ursus americanum*. Next to monkeys and apes, bears are perhaps the most demonstrative of all animals. In addition to facial and bodily expressions, the bear has a voice. According to its mood, it whines, threatens or warns by loud snorts; it roars with rage; cries, bawls or howls in pain. An angry bear may scuff the ground with its paw and a cub may suddenly lunge at a passing person, emitting a "whooshing" noise.

A bear is near-sighted. In fact his eyesight is very poor but his wind is twice as good as a deer's. If you stand still, a bear won't see you. If he does, he may come toward you to bring you in focus. When that happens people get panicky, imagination and adrenaline run wild, and trouble begins. Usually bear and human run in opposite directions, hearts a-thumping.

Besides man, black bears avoid the cougar, the grizzly and the porky. They always seem well fed. No one has yet seen a starving bear, nor do we have any record of a bear dying of exposure. Perhaps that's why they've succeeded in existing for 30,000 years after lions and tigers disappeared from the Americas.

The black bear is cheerful, usually quiet, but very treacherous. Of all the bears in the world, a pet bear is the most dangerous.

Relatives:

The glacier bear is the blue-gray color phase of the black. Brown or cinnamon are also color phases. Litters of cubs have been found with brown, gray, as well as blacks. Only gray phase recorded in New York was on Feb. 22, 1946—one of three cubs found in the Catskills.

Travelling:

Bears tend to avoid open spaces. Ordinary line of travel is meandering. When pursued, however, a bear travels in a straight line over the roughest ground it can find. At dusk, a trailed bear will zig-zag unduly and double back (just like a fox) before it beds down, and may backtrack in its own footsteps better than a deer in snow, ending up on a ledge where it can watch its track. Bears rarely climb trees to escape; they prefer to make a stand or climb cliffs.

Bears are fond of walking on fallen logs, perhaps associating logs with food. They also like to walk on moss. George Buckley* of Gabriels (Franklin County) says a bear will go out of its way to walk on a patch of moss, and he used to cover the pans of his traps with large pieces of moss to attract the animals. Bears are easily trapped. Down right stupid, says George, just like a hog or cow—and chicken-hearted to boot. A bear caught by two toes will probably be found not too far off, sitting, moping and crying, whereas another animal would have escaped minus two toes.

For bear, Indians say the best bait is skunk cabbage. John Bulger* saw a bear nipping off the tops of skunk cabbage on Stony Brook, St. Lawrence County, in May, 1949.

Johnny Helems of Gabriels once tracked a bear up a ravine. The bear crossed on a 15-foot log 6 inches wide and never knocked off any of the 10 inches of snow capping the log. Really marvelous balance.

Swimming:

A bear has one dangerous trait; it will travel in a straight line when it is swimming. Moreover, it will crawl over any obstacle in its path, be it man, rock or log, and when it hits shore it will climb a cliff rather than deviate a few feet to a shallow bank. History reports many a bear killed by Indians who stood knee deep in water with tomahawk upraised, waiting for the bear to swim into range. Harding writes of twin Indians who went to kill a swimming bear and made the mistake of getting their canoe in front of him. The bear climbed in and the Indians fell out, drowning.

Dr. Ralph S. Palmer, State Zoologist, while canoeing on lower Mud Pond

* N.Y.S. Conservation Department employee.

Brook in Piscataquis Co., Me., on July 31, 1951, saw three bears swimming. They were a mother and two cubs, the mother in front and the cubs at 10-foot intervals behind. The mother was in mid-stream when she saw the canoe. She turned, swam back and waited for the cubs. The cubs hooked their paws in her rump and she towed them ashore. She did not change her course to avoid Palmer after heading for shore, but continued on the course set by her before she saw him.

Climbing:

George Buckley watched a bear which he released at Meacham Lake climb a tree. He and another fellow took the bear to Meacham in a cage, opened the door and quickly got into the cab of the truck. The bear got out of the cage, but wouldn't get off the truck, and lay on the cab facing forward. George started the truck, speeded a few feet, then slammed on the brakes. The bear went over the top, landed on the hood, then straddled the cab facing backwards with its body covering the windshield. After a few more jerks, the bear got off very angry. It stood 5 feet from a beech, then leaped and landed 5 feet up the tree and ran up. Its front legs were used for balance only; all the climbing was done with the hind legs which were brought forward under the belly, then extended fully behind. Hind feet were used like pistons. George said it went straight up 30 feet faster than he could run the distance on the ground, and he vowed then and there he'd never climb a tree to get away from a bear.

Other people have seen bears climb trees in a spiral fashion when the animals didn't know they were being watched. But apparently bears climb straight up when in a hurry and climb trees on the uphill side, or concave side if the tree is bent when they are not in a hurry to get to the top.

In feeding on beechnuts, bears will avoid climbing trees under 12 inches in diameter. They select older trees which are easier to climb and which probably have more nuts on them anyway. Old claw marks can be seen on many large beech in good bear country.

Niles Fairbairn* of Margaretville once found a bear about 40 feet up a beech feeding on beechnuts. The bear saw Niles and jumped out of the tree, landing on its rump and hind legs, and ran away unhurt.

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they never touched red and yellow markers, only the blue ones. On July 21, 1949, Howard W. Cram painted red blazes on trees on Tomhegan Pt., Moosehead Lake, Maine. A bear came along after he had finished and clawed most of the paint off, leaving the sap running freely from mature trees. On November 4, 1941, the *New York Times* reported a bear had torn down posters in Baxter State Park, Maine, and plenty of cloth and paper posters put up by New Yorkers have suffered the same fate.

In spring, bears will claw the bark from balsam and spruce in large sheets, then will chew grooves in a circular pattern around the tree, eating sap and sapwood. Some trees are completely girdled and killed.

Mating:

In zoos bear mate for the first time when 3½ years old, but no one knows how old black bear are when they first mate in the wild. Mating occurs in the last 10 days of June and the first week in July in zoos, but only one case of mating in the wild has been observed and recorded. This was in the Yosemite National Park on June 25, 1938.

The black bear is an animal which has delayed implantation. That is, when it mates the egg is fertilized but does not grow until late fall, possibly October. Gerstell measured several well developed embryos in early December which were 0.70 inches long and weighed 0.0015 lbs. Yet at this time about 70 per cent of the gestation period of seven months and one week were already gone; apparently the embryo develops rapidly in the last two or three months.

At mating time pelage is very poor, as bears start shedding their winter fur about the middle of June. In August, the new hair comes out all over and is a deep black, full but short in length. After the end of August, the hair becomes glossy and richer as fall and winter come. The very finest bear fur is found on a 2-year-old just before denning.

Bear average 2.4 cubs every other year. Four cubs are not unusual, 5 are rare and 6 are extra rare. Sextuplets have been reported twice. On May 15, 1946 Tom Wykstandt, Manitoba trapper, shot a female with 6 cubs. She was thin, weighing an estimated 225 pounds. According to A. W. Schorger of Wisconsin, out of 284 litters reported in Wisconsin newspapers 43 litters were singles, 119 were twins, 91 were triplets, 27 were quadruplets, 3 were quintuplets and 1 was a sextuplet. From this, one litter out of 200 is a sextuplet.

The almost hairless young are born in January and early February and are about the size of a red squirrel, weighing 6 to 10 ounces. (A porky gives birth to fully quilled young which weigh nearly a pound.)

Eyes of cubs do not open for about 40 days. Barnett Fowler of Schenectady and I picked up two cubs from Bob Jarvis,* Game Protector, at Dannemora on February 12, 1949. The female cub's eyes opened on February 10 and the male's opened on the 14th or 15th. The female weighed 4¼ lbs., and the male 4¼. Unusually large. Birth date was figured to be during the first week of January. Unusually early.

The several days difference between the opening of the eyes of bear cubs leads one to conclude that cubs are not all born the same day. Dogs have been known to have pups over a period of several days, and delivery in human twins or triplets may span several hours. So why shouldn't black bear have delayed birth, especially since its body processes are sluggish during the period of dormancy when cubs are born?

A bear's milk must be a phenomenally nutritive substance. A female will feed three cubs for three months when holed up in deep snows, but during this time she eats nothing. When she emerges with cubs weighing 10 to 15 lbs. she'll be nearly as fat as the day she denned up. To date no one has made an analysis of bear's milk.

No one knows how often black bear mate in the wild. In captivity, there are records of bear mating nearly every year. It is thought bear don't produce young in the wild every year because cubs suckle for a long time and create a physiological reaction which prevents the female from coming into heat. But if cubs are removed early in spring from the female, there is a very good chance she can be bred again in June or July to produce young the next year.

Some bears live 25 to 30 years in zoos. A female of a pair at the National Zoological Park bred for 21 years and stopped breeding at 24 years of age. The age at which bears stop breeding in the wild is not known.

Dormancy:

Bears do not hibernate; they become dormant like 'coons, skunks, badgers and other carnivorous animals. This is scientific fact, not theory. Bears go into a deep sleep but their heart beat, body temperature and breathing are much higher than those of hibernators (ground squirrels, woodchucks, jumping mice). Bears are easily roused from sleep and have full use of their senses. Matson (unpublished) took the anal temperature of a dormant bear which had 3 cubs with her on March 19, 1951 in Michigan a few seconds after she was killed. He found the temperature to be 94 degrees Fahrenheit. On the other hand, true hibernators may be handled without awakening, feel cold to the touch and show very little reflex reaction. Breathing and heart beat are barely perceptible—only a few times a minute. The body temperature drops, but is higher than the air temperature in the den. It is physically impossible for a hibernating mammal to bring forth young, cut the umbilical cord, lick life into a newly born offspring and help it reach the breasts. A bear will do all of these things; but she has to be awake to do them.

Many theories have been offered to explain why a bear dens up. Some suggest lack of food, some too much cold and snow as explanations. In Colonial days it was commonly believed that bear would not den up if lean but would wander in search of food. DeKay (1842) wrote: "Indeed this condition of fatness is so necessary, that when the supply of food is cut off, instead of retiring into winter quarters, they migrate southwardly to warmer regions. Hence great numbers are occasionally known to enter our territory (New York) from the north, composed entirely of lean males, or females not with young."

George Chahoon (1901) states that, as fat is accumulated and bears go into dormancy, a curious phenomenon takes place during this time. The digestive organs undergo a change and the stomach and intestines contract into a small space. No food can pass through the system and a mechanical obstruction called a *tappen* or plug blocks the passage. The plug is composed of leaves and other wood substances and serves no purpose. Matson describes a plug composed of pine needles, bear hair, dry leaves and mucous from the intestines. This plug was about twice the length of a banana according to Hamilton.

Matson substantiates Chahoon's findings and adds, with evidence to back him, that more than anything else the condition of the bear (amount of stored fat) governs the time when the animal becomes dormant and dens up. He has found bears feeding actively and with distended stomachs in cold weather while at the same time and under the same conditions the stomachs of bears routed from dormancy were empty and shrunken—utterly incapable of digesting food even if the bear ate some. Moreover he also has found routed dormant bears in warm weather when food was plentiful, their stomachs shrivelled.

The accumulation of fat by bears is

an instinctive preparation for a period of food scarcity. Squirrels and chipmunks hide nuts; woodchucks and bears store fat. If the fat accumulation in bear is not sufficient, the activity of the bear may, and frequently does, continue during winter. Matson adds when sufficient fat has been accumulated, the black bear ordinarily retires, without regard for temperature or food, to a secluded place and becomes dormant. When this happens the stomach shrivels.

Denning:

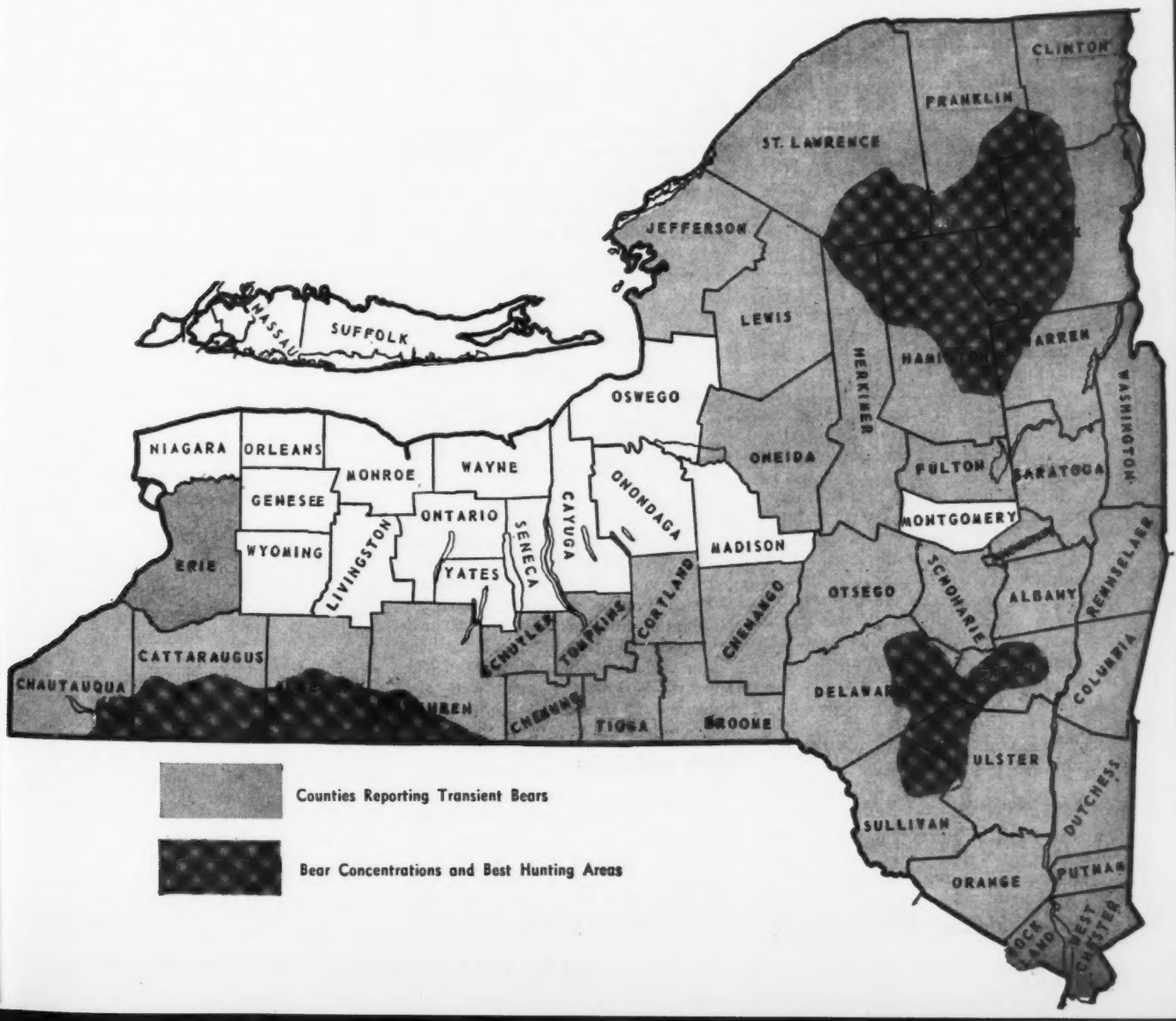
Of the 29 bears Mike Todd has shot only one denned on the south side of a mountain; the others were on the north or northwest side. Niles Fairbairn thinks bear prefer the dark side (north) to den on. Matson doesn't think it makes any difference; he's found most of his bears in the open, some under tree roots, under logs, and in slash. Many have seen them in hollow standing trees. A bear seems to den any place, provided it is secluded.

The two cubs Fowler and I picked up at Dannemora were discovered when several men were hunting snowshoe rabbits. One hunter stepped on the bear sleeping in a depression of leaves. She had some snow on her. The bear deserted her cubs when the hunter fired in excitement. A pregnant bear often will abort its young when near birth if it is frightened or chased from a den.

Predation:

Buckley watched a black bear carry off a sheep which it held in its jaws by the throat. It tossed the body of the sheep onto its back and jumped a barbed wire fence. About sheep, Mike Todd said "Yep, carry 'em like a babe in its arms. Trailed one up Kelly Hollow. Bear skinned out the sheep from the belly, neat as a pin. Found the hide under a log. Bear came back in the night to eat on the carcase sooner'n I thought. Never did git that bear."

Niles Fairbairn trapped a bear at Winter Clove near Roundtop on Sept. 15, 1951. The bear raided Merton Witcomb's bee hives, ripping part of the chicken-wire fence down. Niles fastened the trap to a truck bumper weighing about 90 lbs. The bear got caught and Niles tracked him by flashlight at 4 a.m. The bear got hung up between two trees after dragging the bumper nearly a mile. When the bear saw Niles, it pulled up a boulder out of the ground with one paw which Niles said



would easily weigh 500 pounds. The bear weighed 390 pounds and stood 9′ 9″ from tip of hind toes to tip of nose when it was hung.

A bear will eat pigs, sheep or calves, will never pass up a deer hung in the woods, and will hide the carcase under leaves or log. Cabins are raided for flour, pork, bacon or anything that smells good. Cabin owner usually builds a new cabin rather than repair the old one.

Laws in New York:

In 1892 New York placed a $10 bounty on bears and repealed it in 1895. Bounties were paid on 907 bears. 1894 was the last year for the bounty and in that year bounty was paid on 359 bears from the Adirondacks. There was an estimated population of 1,500 bears in the Catskills and Adirondacks in 1894.

In 1903, sportsmen headed by H. V. Radford of New York City secured the passage of a law which recognized the black bear as a game mammal. Under this law, bears were protected during July, August and September. This law also provided for the filing of a report to the Commission by hunters killing a bear, stating the place, date, sex and weight. 100 were reported in 1903. Many states, even today, don't recognize the black bear as a game species and allow hunting the year 'round.

In 1923 New York set its first bear season in the Conservation Law. The law said "a person may take 1 bear only in an open season. Wild bear may be taken only on land. No jacklight or other artificial light, trap or salt lick or other device to entrap or entice bears shall be used, made or set, nor shall any bears be taken by aid or use thereof. Bears shall not be hunted, pursued or killed by any dog of either sex."

Present bear law is like the above but adds that "no person shall hunt, pursue, or kill deer or bear with the aid of a dog or aircraft of any kind. In the counties wherein the use of a rifle in the taking of deer is not permitted, a person afield shall not possess a rifle larger than 22 caliber rim fire during the open season for such animals. Also states that bear must be not less than one year old to be legally taken.

No bear damages have ever been paid by New York. Some states like Pennsylvania pay bear damages.

Bear Records:

In the autumn of 1904 about 150 bears were killed in the Adirondacks, 11 weighing over 300 pounds. A 428-pounder was the largest. In 1905 Charles Monroe, Sullivan County, killed a 480-pounder. The average live weight of 121 bear in 1906 was 174 pounds, 6 were over 400 lbs. and 12 were between 300 and 400 pounds.

There were 170 bears taken in 1949, 197 taken in 1950 and 84 taken in 1951.

The record bear for New York is 532 pounds (scaled weight) shot by Jean Mose of Saranac Lake in 1938. Mike Todd may have killed a bigger one (see above) in 1908, but unfortunately there were no scales handy. Large as these bear are, they seem small when compared with the 802½-pounder taken at Stevens Point, Wisc., in 1885 (scaled weight) and the estimated 900-pounder shot on the Moqui Reservation, Ariz. in Dec. 1921 by M. E. Musgrave. In 1951 a Michigan archer killed a 632-pounder with one arrow. These are all unusual sizes. So is the 530-pounder shot by Dave Fairbairn in 1919 with Benjamin O'Dell in Tunis Lake Hollow in Ulster County. This bear was shot while sleeping in a hole and had to be pried out with poles; a sleigh drawn by wild-eyed oxen and owned by Orson Todd provided the transportation.

For estimating weights, Matson takes the hunter's guess, divides by two and adds or subtracts 25 to 50 lbs. according to his personal judgment. He also says females seldom get over 150 pounds, while males rarely go over 300. Most bears shot in New York weigh between 130 and 180 pounds, with many below 130.

ESTIMATED AVERAGE WEIGHTS OF BLACK BEARS
(Fall figures from Gerstell 1938)

Age	Estimated Average	Estimated Range
Cubs (10 months)	55 lbs.	30 to 80 lbs.
Yearlings (22 months)	105 lbs.	80 to 130 lbs.
2 yr. olds (34 months)	155 lbs.	125 to 185 lbs.
3 yr. olds (46 months)	205 lbs.	180 to 240 lbs.
4 yr. olds (58 months)	255 lbs.	215 to 295 lbs.
5 yr. olds (70 months)	305 lbs.	255 to 350 lbs.

(older animals up to 600 pounds.)

Nathaniel Fast of Herkimer County is believed to have killed more game than any other New Yorker in the same period: 76 deer in one season, 96 bear in 3 seasons, 25 wolves in one year. When Thomas Meachum, Town of Hopkinton, St. Lawrence County, died January 1950, the *St. Lawrence Reporter* said his records showed he had killed 214 wolves, 77 panthers, 219 bears and 2,550 deer in his life time. Not conservation, but part of the record.

Odds and Ends:

One bear killed in Waushara County, Wisc. in 1875 yielded 212 lbs. of fat, which was 5″ thick on the rump. The fat on a dormant bear is called a "blanket." A bear in December will yield from 10 to 15 gallons of oil. Colonists got about $6 a gallon; oil was used in medicine, hair tonics, perfume and as olive oil substitute. It tastes sweet.

The average loss by hog-dressing a bear as found by Gerstell was 14.1 per cent of live weight.

The nose of a black bear is straight; a grizzly's is concave or dished.

Bear skins should be handled open and stretched carefully. In skinning be careful to leave nose, claws, and ears on the hide. Footprints of an average bear measure about 8 inches long. The color illustrations show the right front and right hind feet of an average bear. Normally the heel of the hind foot will not show except in mud or snow over two inches deep. A bear walks with its elbows sticking out, and looks pigeon-toed.

Signs of bear: Overturned rocks, smashed stumps, clawed trees, broken fruit trees, grape, shadbush, berry grounds torn up, large scats, large piles of apple mash.

Be sure to cook bear meat thoroughly no matter what expert tells you that rare bear meat is the nuts. Bear are known to carry *Trichinosis*, like pigs. In fact, bear meat is called wild pork; a female is a sow or she-bear. Furthermore, bears grunt and squeal like pigs when rooting. The only case of *Trichinosis* east of Rockies was reported near Albany in 1942. I talked with the guy. He said it's something he doesn't want again.

Most bears are either walking or running full speed ahead (with no in between speeds) when you see them.

Largest skull of a black bear is 13½ inches long and 8 wide. It was trapped by Roy Keeler, Oct. 1, 1934 in Caribou National Forest, Idaho.

You need three times as many men to drag a bear home as you do for a deer. A bear drags hard, about like a washtub full of sand; very rolly-polly.

Some bear trappers carried strychnine, just in case they stepped in a bear trap.

Finale:

There's a story told by Clint West* formerly of Lake Colden. He awoke one night in his cabin, hearing a noise outside. He got his flashlight and saw a bear in one of his old pork barrels. Clint shot him in the rump with a shotgun. The bear went through the barrel and ran over the hill with the barrel on its body between the front and hind legs. Next spring Clint heard another noise. In his flashlight beam stood the same bear, still wearing the barrel. Beside her she had 2 small cubs, both wearing small kegs around their bellies.

This goes to prove that you can hear almost anything about bears.

—Nick Drahos

HUNTER TRAINING (2)

AS forecast in the April-May issue of our magazine, a series of four meetings was held this past summer in Buffalo, Syracuse, Ticonderoga and New York City at which N.R.A. instructors in the Junior Hunter Training Program were given a chance to express their views concerning the way the program has been operated in this State.

The fact that all of the meetings were extremely well attended confirms the opinion of the Department that the program rests on a firm foundation—the enthusiastic and unselfish support of the instructors themselves. At these meetings, many of those present sacrificed a Saturday or Sunday and drove as much as 300 miles in order to contribute their ideas. Department as well as N.R.A. officials were present at all of the meetings, so that there is now a very extensive understanding of what should be done in order to make the program function more smoothly.

Among the suggestions advanced by the instructors present at these meetings were:

(1) No exemption should be made in favor of the veterans of military service; it was the concensus that men in this category, although experienced in the handling of firearms, are not therefore qualified as safe hunters in the field. (Most of those advancing this opinion were themselves veterans.)

(2) Instructors often come up against pupils who already have had wide experience in the safe handling of firearms. It was felt that the amount of training required before issuance of certificates to such pupils should be left to the discretion of the individual instructor.

(3) It was felt that there has been inadequate publicity to license issuing agents; some of these agents do not appreciate the importance of the program and are not co-operating by sending applicants to instructors. In other cases, certain Special Game Protectors have been issuing licenses to Junior Hunters without requiring them to take the course.

(4) More printed material is needed to give the student when he has completed the course. Such material (in bulletin form) would remind the student of the lessons he learned during the course and would refresh his memory on certain important points.

(5) More press and radio publicity is required. It was felt that such publicity could best be prompted by individual instructors, many of whom have already found their local press and radio outlets extremely co-operative.

(6) It was suggested that the Department work through the Department of Education, so that students at school would be advised of this program and of various opportunities to participate in it. The Conservation Department will do its best to see that this is done.

(7) The possibility of introducing this program to already established adult education classes was advanced.

(8) It was felt that the Department should send a list of all N.R.A. instructors to each individual instructor, so that the latter know where to go for help when necessary. This was done at once.

(9) The Department should publicize this program at every sportsmen's club meeting, in order to attract more instructors and also to alert local hunters to the program.

It appeared, however, that the greatest difficulty to date has been in the proper scheduling of classes. Up to now, prospective hunters have called instructors and requested that the course be given them on short notice. In many cases, this has been impossible; in others, it has worked undue hardship on the instructors. What is needed appears to be a system of definitely scheduling classes (properly advertised in advance) at which all prospective hunters in a given area can be processed. It was agreed that the classes should not be too large, but that last minute instruction to individuals was unsatisfactory and inconvenient to both instructors and hunters.

At these meetings, spokesmen from the Department advanced two new suggestions: (1) That all persons (regardless of age or experience) who have been involved in a hunting accident should be required to take the full NRA course before being issued another license. (2) That the course of instruction should be extended to all new hunters, regardless of age.

Both of these suggestions were enthusiastically received at all four meetings. But with regard to the second one, officials of the NRA seem to feel that such an extension at the present time would be inadvisable in view of the load that might be placed upon instructors already hard-pressed.

There remains one big problem—that of financing this training program. To date the Department has supplied only the written material and insignia; the NRA has received nothing for the expenses involved in the organization and conduct of the course. Obviously, the Department cannot expect to continue to receive such valuable services for nothing, and in conferences with NRA officials during the past month means have been explored of reimbursing the NRA for expenses incurred.

The obvious success of this hunter training program has already been reported in previous issues of this magazine. Nevertheless, both the Department and the NRA are well aware that it could be improved in many particulars, and both continue to welcome suggestions. —P. W. FOSBURGH

New York's Biggest and Best

RECORD WHITETAILS

1 *Killed by Roosevelt Luckey, 1939, Allegany Co.; Owner, Roosevelt Luckey, Hume; Score 199 6/8*

In the second issue of this magazine, published exactly six years ago, we offered a spread similar to this—showing the ten biggest and best whitetail deer heads taken in New York over the years. Since then, times and records have changed—and so have scoring systems. The system used in rating the heads shown here is The Standard Official Scoring System, established through the efforts of the Boone & Crockett Club and generally accepted for North American big game throughout the world. Score sheets are available by writing this magazine.

The Department, although it goes along with this system, is not in complete agreement with it because it invokes a penalty for "brow point prongs"—which we think are an attractive feature of a whitetail deer head. (For a drawing showing brow point prongs, see page 7.) But in the last analysis, evaluation of a deer head is a matter of personal preference.

What every deer hunter hopes to see is a head something like those shown on these pages. And judging by present indications, there are still quite a lot of them being carried around by New York's current deer population. Write us if you collect one.

3 *Killed by Denny Mitchell, 1934, Essex Co.; Owner, L. P. Evans, Elizabethtown; Score 174 1/8*

5 *Killed by Henery Van Avery, 1921, Hamilton Co.; Owner, Henery Van Avery, Mayfield; Score 167 6/8*

4 *Killed by Emilius Roberts, 1906, Hamilton Co.; Owner, Conservation Dept.; Score 168 3/16*

2 *Killed by Sidney Mawson, 1938, Cortland Co.; Owner, Sidney Mawson Manlius; Score 183 7/8*

6 *Killed by Clarence Wade, 1951, Essex Co.; Owner, L. P. Evans, Elizabethtown; Score 167 4/8*

10 *Killed by Martin Solway, 1946, Ontario Co.; Owner, Conservation Dept.; Score 166 3/16*

8 *Killed by Lillian Trombley, 1942, Genesee Co.; Owner, State Armory, Ticonderoga; Score 166 4/8*

9 *Killed by Henry Ordway, 1890, Warren Co.; Owner, Conservation Dept.; Score 166 3/8*

7 *Killed by Robert L. Banks, 189—, Hamilton Co.; Owner, Fort Orange Club, Albany; Score 167 3/8*

project E 2

By W. J. Hurley

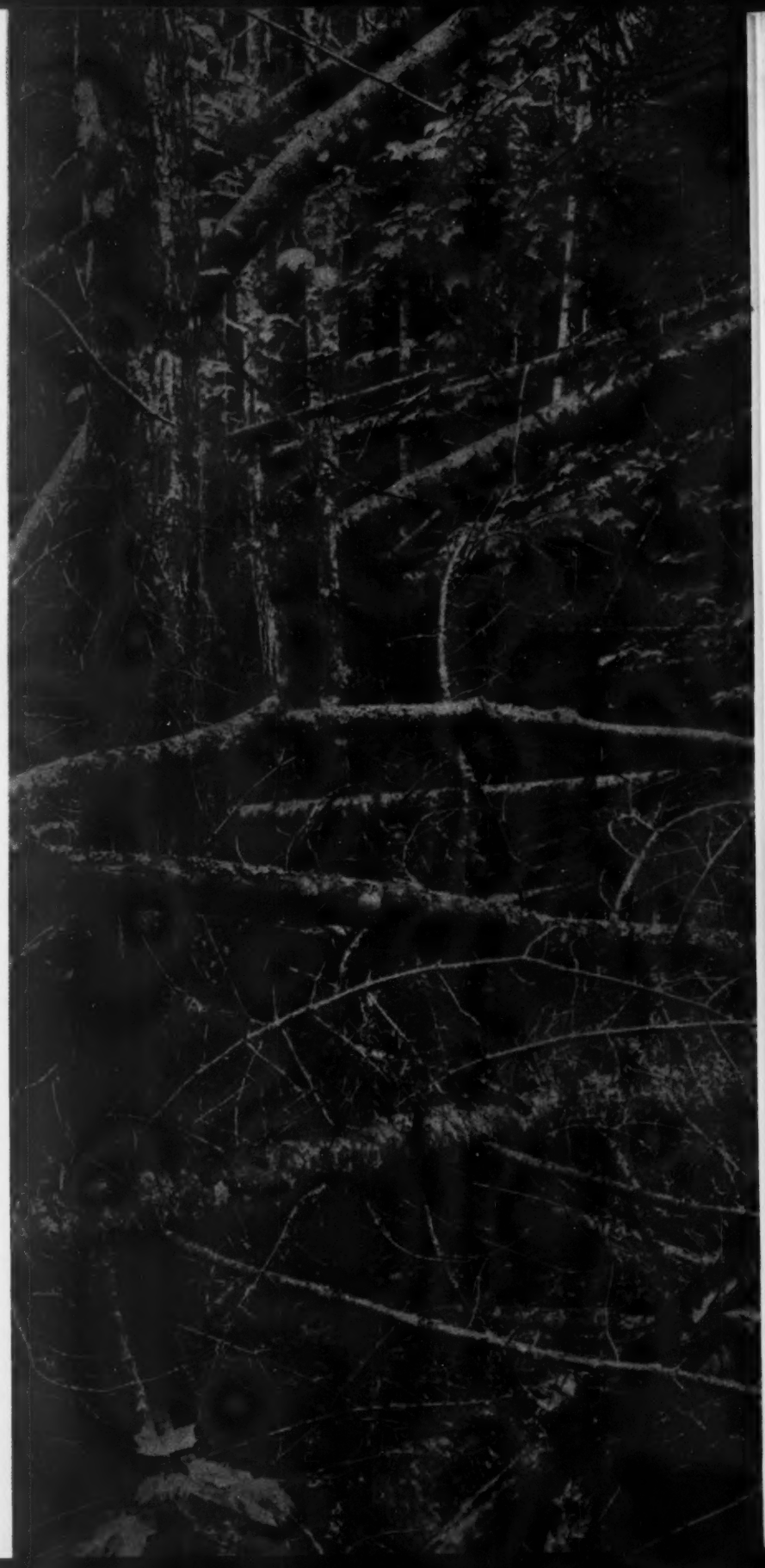
SINCE we in the Adirondacks are not used to winds of such violence as visited this area in November, 1950, it really was quite a shock to local residents when they began to realize the amount of damage that had been done to our forests.

Naturally, the first thought that came to interested parties was what the State would do about it, since most of the timber blown down in this section seemed to be on State lands. It was feared that the existing laws regarding the State forests would prevent any action being taken on cleaning this timber up, although at the same time it was apparent that sound reasoning on the part of the parties in power would dictate some sort of policy which would lead to the salvaging and cleaning up of this vast quantity of logs and pulpwood. Certainly the fire hazard in the forests was increased a hundred-fold, not only because there was so much dry timber around, but because it would be just about impossible to get through the woods to fight a fire.

Once the Conservation Department received the green light to move this timber, it seems to us that they hit upon a reasonable method for doing it.

We contacted Mr. Petty's (District Forester) office in Saranac Lake when we heard that there was going to be some action taken in this matter, and as soon as he received the specifications and other pertinent information regarding it he passed it on to us.

I must say the contract, with all those specifications, was a shock at first. It really did look as though it might be a tough one to tackle, and the more conservative lumbermen in this section pretty much shied away from the salvage projects—in fact we were warned against it by almost everyone in the business. The main arguments were



that if operations were found unprofitable on account of the cost of lumbering, and a large area had to be cleared, it could run into too big a loss. Also a close look at the contract will show that the clauses in regard to piling brush, keeping roads cleared, etc., look very formidable and tend to discourage most people. And the fact that a State Forester would be continuously on the job frightened some people off; they were afraid the Forester might insist on the buyer taking timber that wasn't merchantable, and that he might generally make things tough for the contractor.

In spite of all these objections, we decided to bid on project E-2, which means project No. 2 in Essex County. This covered lots 318, 338, 358 in Township 11 OMT (Old Military Tract) and lots 1, 5 and 6 Whiteface Mt. Tract; also lots 317 and 337, Twp. 11 OMT.

Having bid the contract in, our biggest problem was getting men to work in this timber. This is easy to understand, since none of them had had any experience in blow-down like this, which really is a lot harder to work than standing timber. Consequently, it did (and still does) cost more to get logs and pulpwood cut in a blow-down area.

On account of the manner in which the timber lays on the ground, it is very hard to cruise it accurately and know how much timber to expect to get off a given area. As a result, it is possible for a contractor to get a lot of money tied up in roads and be very much disappointed in the amount of timber he gets, so that the cost per thousand feet of building roads may be out of line in comparison with a job that can be carefully cruised.

We have been fortunate for the past two winters in the amount of snow that fell; there was not too much of it. But it would seem that with a heavy fall of two to four feet, with more coming all the time, that it would be practically impossible to get this timber out in the winter. It is necessary for men to climb up and over a lot of these trees to get at them, and if they had to climb on top of a lot of snow as well they would be in a precarious position much of the time and the danger of accidents would be too great. Also, it would be just too much of a job to saw under such circumstances.

Unfortunately, a lot of this blow-down timber is so far from main roads that it tends to discourage most people from bidding on it—not only on account of the cost of getting to it, but the uncertainty of just what will be found when the heart of the area is reached as to quantity and quality. We do run into some timber that was blown down previous to 1950 and this, of course, is not merchantable, but in some cases has to be moved along with the other. That makes for additional expense.

Another problem that confronts the purchaser this year is the fact that it is practically impossible to move spruce pulp at a profit. Last year the paper companies were anxious to get the pulpwood and paid as high as $3 per cord extra for wood from a blow-down job. This allowed for a small profit to the contractor. At the present time, however, the mills are plugged with pulpwood, and when they will take it at all they have reduced the price to a point where the wood can't be gotten out at better than a break-even price.

So much for the disadvantages of the State blow-down to the purchaser. Now let's see what the advantages are.

First of all, generally speaking the timber is quite good and will make good lumber except in cases where the bugs have started working in it. Furthermore, this lumber grades out very well and is fairly easy to sell. On account of the size of the trees it is possible to saw out good-sized timbers and thereby realize a little more for the lumber.

THE fact the State sells the timber on a basis of so much per thousand feet allows the buyer to figure exactly what his stumpage will be and eliminates the gamble that is necessary if you have to lump off a large area at a certain price, which would be especially impractical in the blow-down. Also, the fact that this salvage program made logs available for the numerous mills in this section has been a big help to lumber manufacturers.

The next problem seems to be what the State can do to clean up as much as possible by next spring, since it is evident that bugs will be working in it by that time.

It seems that the State will be more successful in letting the cutting of what is left if they will:

First, give a buyer the opportunity to go in and cut smaller parcels and even allow him to take the timber easiest to get at on those parcels, if necessary. By doing this they should be able to get more cutting started, and experience shows that once a contractor starts on a job and has his equipment and men working on it, he usually continues on further than he agreed to go at the start. It seems, also, that any restrictions that have been attached to the contract that aren't absolutely necessary could be dispensed with in order to get more cutting started. And right here I would like to be more specific about this matter.

The provisions in the contract that require us to pile brush make it very expensive for the operator; piling brush takes a lot of time and so costs a lot of money, and we don't see that it reduces the fire hazard unless the brush is removed. What this clause in the contract does do, however, is discourage a lot of operators from bidding on a clean-up job, and I assume that the State wants as much of the blow-down cleaned up as possible.

Then there is the provision requiring the operator to lop the tops of trees right up to the terminal bud. Of course that is an additional expense, and we don't think that this expense is justified by the fire prevention that it is supposed to provide. The old top-lopping law, that requires lopping down to a 3-inch diameter, ought to be good enough; our experience shows that if you lop a tree according to that law, the tree will lay as flat as it ever will.

There are still large areas that haven't been started yet. The State should be able to excite more interest in this cutting if they could work out a very low stumpage proposition and make it known to prospects that it could be bought at a very low price, so that more money would be left to spend on the roads that it would be necessary to build. The additional time (and money) consumed in working a blow-down job is spent in actually climbing up and over the fallen trees, in moving trees and other material that can't be used, and in cutting trees that turn out to be of no use. From what I hear, there is a lot of this sort of expense in all blow-down jobs, not just in ours. It seems as though the State ought to make more allowance for these things in figuring a stumpage price.

Although there certainly has been a lot of timber destroyed, a large percentage of it has been salvaged where jobs have been let and in most places there is plenty of timber left, so that the forests should continue to flourish. And the State must be in much better shape to fight fires in some areas now than they were before the salvage started, because of the numerous roads that have been put in. Very few of these roads are in conspicuous places where they mar the beauty of the country.

Our experience with the Conservation Department has been excellent and Mr. Petty has been most co-operative in every way. Also Mr. Floyd Olcott (Department Forester), who has direct supervision of our jobs, has been fair and reasonable, while at the same time looking out for the best interests of the State.

Natural white pine (left) and plantation released by girdling pitch pine

The Pitch Pine is Dead— Long Live The White Pine!

AMONG the New York trees which may be classed as "weed species," one of the best known is the pitch pine—a scrubby, medium-sized evergreen, easily identified by its prickly cones that persist on the branches for many years (giving the tree a "knobby" look) and by the added fact that its needles are borne in clusters of three. It is especially common on Long Island, on the sandy plains along the route from Albany to Lake George, in the Oneida Lake basin, and in a sizeable area south of Plattsburg. Residents of the Albany district are thoroughly familiar with the pitch pine barrens or "pine bush" between Albany and Schenectady, from which towering columns of yellow smoke may be seen by day (and a red glow by night) on the occasion of the brush fires which regularly get out of control there during the first dry spell in April or May.

Pitch pine is a symbol of failure, a symbol of land that was poor to begin with, and has been made poorer by ill treatment from its human occupants. The tree grows naturally on the driest soils, and because of its resistance to fire will survive and multiply long after all the better species have been eliminated. There is little market for the timber here in New York, so that areas which become dominated by pitch pine represent something close to an economic zero.

Foresters, whose job it is to make forest land produce something, have long been allergic to pitch pine, but until recently (in New York, anyhow) they haven't done much about it. Within the past ten years however, two enterprising field supervisors working with the Conservation Department have had a hand in converting pitch pine stands to something better. Philip E. Barber and Harry W. Holcomb are in charge of White Pine Blister Rust Control respectively at Saratoga Springs and Malone, and thus have a special interest in the welfare of white pine within their working territories. Back in 1933, Barber was asked by the Forestry Committee of the Saratoga County Board of Supervisors for some advice on what to do with 900 acres which the County had acquired as part of the County Forest in the Town of Moreau, a few miles south of Glens Falls.

This tract was typical of the abandoned farms on the sand plains in the northern part of Saratoga County, and was occupied chiefly by a growth of pitch pine and gray birch. Phil recommended planting the area to white pine and red pine, with the further recommendation that the birch and pitch pine should be gotten rid of after the plantation became established. This seemed like a practical way of replacing the weed trees with more useful species; furthermore, it was beginning to be recognized that white pine needed a "nurse tree" of some kind in its early stages to protect it from the white pine weevil, an insect which burrows into the tips of the tree every year and eventually makes it worthless for lumber. This bug doesn't like shade, and it had been observed that young white pine growing under a cover of gray birch or aspen was almost free from weevil attack, in contrast to the badly weevilled plantations growing out in the open.

Here was a good chance to undertake an experiment on a large scale, and the County officials agreed to co-operate. In the two years, 1933 and 1934, nearly the whole 900 acres were planted, and in 1947 and 1948, when the planted pines were six to eight feet high, the pitch pine and gray birch were girdled. This was done later than it should have been, but the operation was unavoidably delayed on account of the labor shortage during the war years. By that time the planted pines were suppressed, making only three or four inches of height growth a year, and many of the red pines (which really should have been left out of the experiment altogether) had died or become wholly stunted from the overhead shade. The girdled pitch pine took several years to die and thus released the

white pine gradually so that they didn't suffer from too sudden exposure. Today, most of the pitch pine and birch are dead, though many of the pine snags are still standing. The white pine (and surprisingly enough some of the red pine) are taking on a new lease of life, and many of them are putting on a foot of height growth a year. Best of all, there is no weevil to be seen, and it won't be long before Saratoga County will have a thriving white pine forest in place of a worthless piece of scrub growth.

About the same time that all this was going on in Saratoga County, Holcomb was dealing with a similar case "up north." The Town of Peru in Clinton County is noted for its abundance of pine, which reproduces itself prolifically on any of the light soil types which are not being actively farmed. Here is an interesting point, though: Pitch pine seedlings won't grow in the shade of their parent trees, because they must have almost full sunlight; white pine, on the other hand, finds the conditions produced by the overhead canopy of the pitch pine just about ideal for seed germination and seedling development, so wherever there are white pine seed trees nearby, pitch pine groves are likely to have a dense understory of white pine.

THE job was the same as with the plantation in Saratoga County: Let the white pine get established and then eliminate the pitch pine over-story. Mr. Paul Allen, a farm woodlot owner in Peru, had such a problem, and as he was a co-operator under the Forest Practice Act, knew just where to go for help. The next time Harry came around on his Blister Rust check-up, he and Mr. Allen worked out a plan for girdling the pitch pine to release a dense young stand of white pine saplings on about 25 acres. The operation was done in the winter of 1948, and the girdling was easier in cold weather, because the chips came out cleaner. At any rate, most of the pitch pine died the next summer and as Holcomb said after looking the job over, this past season, the pine saplings "had put on more height growth in the last four growing seasons than they did during the first 10 to 12 years they were striving for survival."

Here we have two examples of the way in which people in the forestry business, using a little ingenuity combined with a knowledge of how trees grow, can "make the (pitch pine) desert blossom like the (white pine) rose."

—E. W. LITTLEFIELD,
Superintendent, Forest Management.

burden lake

LOCATION:

South central Rensselaer County, twelve miles east of Albany and one mile south of Averill Park.

PHYSICAL FEATURES

Type—This is a natural pond enlarged and elongated by construction of a dam. The two lower, shallow sections of the lake are artificial.

Elevation—627 feet.

Maximum depth—37 feet in larger (south) section; 7 feet in middle section; 12 feet in northern section. A warm, shallow, productive lake

Length—Two and one-half miles.

Maximum width—0.6 mile.

CHEMICAL CHARACTERISTICS:

Oxygen—Good supply everywhere except in deepest water. pH—Slightly alkaline.

FISH:

Lake contains 15 species, of which those most frequently caught are: largemouth bass, chain pickerel, yellow perch, blue-gill and common sunfish, rock bass, bullheads and calico bass. Yellow perch are most abundant in the deeper, southern section of the lake and walleyed pike are occasionally taken here also. Other species are generally distributed over the lake.

GENERAL:

Weed beds are plentiful, and shelter for the abundant pan-fish is almost too good. There are three boat liveries. Cottages plus other accommodations for vacationers are abundantly distributed around the lake.

shocking!

As a fish culturist, Dave Haskell has plenty to do in his regular work in charge of New York's largest trout hatchery at Rome. But he also happens to be an electrical engineer. His pioneer work some years ago did much to pave the way for the present wide use of electric shockers in stream research. Electricity stuns but does not kill fish. This fishing method is not for everyone (it is illegal without a permit), but it helps biologists get the needed information to test survivals or make other studies directed toward improving angling.

The electric shocker enables biologists to measure fish populations in selected sections of streams. Two methods are in use. The first, using alternating current (AC), has become more or less the standard method of measuring stream populations since its introduction in 1939. The AC electric shock is used to stun and immobilize fish, so that they may be picked up with a hand net. A second method employs direct current (DC). With DC the effect of the current is to draw fish to the positive electrode, where they may be picked up. If the positive electrode is a dip net, many of the fish will swim directly into it.

The study this year included work on both methods. Measurement of voltages in water requires special types of meters which have not previously been available. It has been possible to determine many troublesome points, where knowledge formerly has been limited to guesswork, and thus bring about improvements in apparatus and operational procedures.

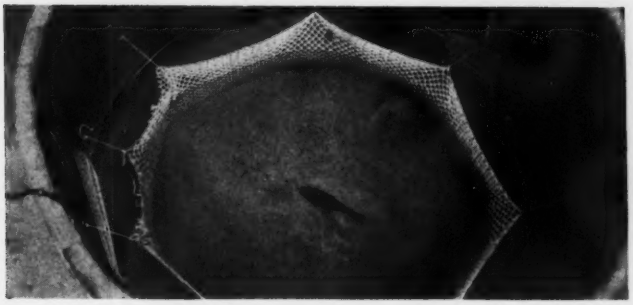
Since for most shocker work one terminal of the generator is grounded and the other connected to an electrode at the surface of the water, the electric current must flow through the soil of the stream bottom and through the water. The electrical resistance of soil and water determine how well the shocker functions in a particular stream. Laboratory apparatus for measuring water resistance is far too delicate and complicated for field use. At left is shown a simple apparatus which has been found to give sufficient accuracy for shocker purposes. A sample of water is placed in the beaker which has a metal plate at the bottom and another near the top. The resistance of the water is measured with an ohmmeter, with which most field units are already equipped. Soil samples may be measured with the same apparatus, the soil being packed into the beaker. Both soil and water resistances vary with their temperature. To the shocker the important point is the ratio of soil and water resistance. One measurement of each will permit the operator to predict the shocker effectiveness in a particular stream.

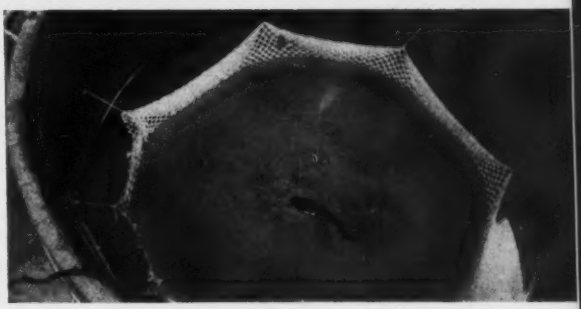
Fish flesh has a lower electrical resistance than most water. Thus, when a fish is in water through which electric current is flowing, the current tends to converge on the fish, and more current passes through the fish than would pass through the water which it replaces. The presence of the fish thereby changes the electric field. Since it is impractical to attach meters to a fish, a test "fish" was made having many of the electrical characteristics of a brown trout.

At right are shown a 3½-inch and a 7-inch "brown trout", each consisting of a glass tube having a copper plate on either end and a resistor sealed inside equal to the resistance of the fish. Attached wires are for connecting to meters.

Our early tests with the DC shocker were quite discouraging since the fish seemed to follow no fixed pattern of moving to the positive. So we made a long study which led to several interesting conclusions: The fish does not move to the positive because he has any desire to do so. His swimming motion is controlled by shocks to the nerves in his muscles, which in all cases steer him to the positive, and in some cases actually cause him to swim due to electrical stimulation. Neither the brain nor the spinal cord is involved.

At right, a freshly killed trout is being touched with probes connected to low voltage DC. If the negative probe is held in contact with one end of the fish, and the probe touched to his upper side at the other end, the end last touched will flip up. If the polarity is reversed and the negative touched to the fish last, the end touched will try to go down, resulting (since the fish is lying on a board) in the center of the body being pushed up.





If a freshly-killed trout is placed in a tub so that the positive electrode is on his left and the negative is on his right, his head stuck in sand to hold him upright, at the instant the switch is closed the tail is bent violently to the left toward the positive, as shown here. Study of these motions of dead fish show that the tail is always moved in the direction to turn the fish toward the positive pole. It is possible to make a dead fish swim toward the positive entirely due to the electrically produced nerve action.

The electric forces which act on dead fish act in the same manner on live fish. But the live fish also moves due to his own inclination, so that actual motion is a combination of voluntary and involuntary movements. As the electricity gradually anesthetizes the fish, his motion is controlled to greater extent by the involuntary impulses from the electric shock.

With the swimming motion understood, work is proceeding on the application of the findings to stream studies. It is hoped that eventually a DC shocker may be developed for population studies in small ponds.

—David C. Haskell

THE BACK OF THE BOOK

SCATTERSHOTS AND DEPARTMENT ACTIVITIES

INTERNATIONAL RELATIONS

Fish & Wildlife Service,
Washington, D. C.

Dear Sir: Below is a sketch of a metal tag reported to have been attached to a "freshwater trout." This

was probably a sea trout or salmon smolt, as it was found in the stomach of a fair-sized dogfish (shark). The dogfish was caught in a position 30 miles S. by W. of the Eddystone Lighthouse in the English Channel. We have no trace or knowledge of anyone using this particular type of tag over here.

If the letters on the tag are abbreviations for some Department, the only one we can think of is the New York State Conservation Department. Underneath the letters CD on the tag are the contractions "Pts. Pend." in very small letters.

I shall be very interested to hear if you have used this form of tag or if you are able to recognize it. The tag was found by a fish merchant at Looe in Cornwall, England, and the dogfish was caught on the 20th June 1952 by a long liner.

—A Swain, *Ministry of Agriculture & Fisheries, Victoria Embankment, London*

Dear Sir: We are unfamiliar with the fish tag sketched in your letter of June 26. It may be the tag of the New York Conservation Department, as you suggest, and we are, therefore, sending your letter to that organization.

—Paul E. Thompson, *U. S. Fish & Wildlife Service*

Dear Mr. Swain: It is indeed one of the New York State metal identification seals or tags which are used in marking or identifying commercially propagated trout raised under a commercial fish hatchery license for food purposes in this State.

In recent years there has been a very considerable interest shown by various Danish trout hatcheries in importing commercially propagated trout into this State and we, upon certification of the Danish authorities that these various Danish fish culturists are properly licensed to propagate trout commercially in Denmark, have in turn authorized them to import trout into New York State. Last year these Danish hatchery people imported in the neighborhood of two million trout, each one of which was marked or identified by affixing thereto metal seals provided by this Department.

From this point on, we can only use our imagination. But it seems logical at least that a passenger liner may have acquired some of these Danish trout scheduled for importation to New York (and marked as described) for use in their commissary, and that having prepared such trout for consumption aboard ship, the tail of the trout (to which the tag is normally affixed) was tossed overboard with the day's complement of garbage. A shark picked it up.

—A. W. Bromley, *Asst. Supt., Bureau of Inland Fisheries*

DEER STUB CHECK

Last fall a check of deer hunters (as described in the February-March, 1952, issue of The Conservationist) revealed that only about 72 per cent of those who were successful in legally taking a deer complied with the law in sending in to the Department their license stubs reporting that fact.

Further analysis of the data shows that the proportion was lowest (about 65 per cent) for the western region of the State, and that this directly reflected a lower degree of compliance on the part of residents of that area who hunted locally. On the other hand, hunters from the western counties who took their deer in the Adirondacks or Catskills reported at roughly the average rate. The highest rate of return (about 89 per cent) was for residents of Catskill counties who hunted in the Adirondacks. A generally high return was made by hunters from the Metropolitan New York area wherever they hunted. Although these regional variations are of interest, they must be considered as tentative until more data are obtained.

FLY-FISHING-ONLY

Originally scheduled for this issue of the magazine was a report on the fly-fishing-only experiment, launched by the Department on sections of five streams this past season. Because our deadline for copy made it impossible to collect the necessary information so soon after the close of the trout season, this report will be carried in the December-January issue.

SPOTTED RABBIT LIVERS

Tularemia and Tapeworms

Each fall and winter the Department receives a large number of inquiries from hunters regarding the white spots they find on rabbit livers which they fear indicate that the animal has tularemia—and so is not safe to eat. Several years ago this magazine published an article by Dr. E. L. Cheatum pointing out that danger from this source is remote and describing how to recognize the symptoms of tularemia if it should be encountered. This article is reprinted here for the benefit of those who have not seen it before, and to promote a wider understanding of the matter.

Top: liver infected by tapeworm

Bottom: infected by tularemia

Of all the parasites of the rabbit, dog tapeworm larvae give the greatest concern to the rabbit hunter; hundreds of rabbits are needlessly discarded because of "white spots" on the liver. This is because the dread disease, tularemia, has been described as producing white spots on the liver and spleen, and no one in his right mind wants to risk tularemia. But, since dog tapeworm larvae are of such common occurrence in cottontails and snowshoe hares (about 80 per cent of over 2,000 examined at the Wildlife Research Laboratory, Delmar, were found infested), and since in the course of their migration through the liver they are often seen as white spots or whitish streaks on its surface, there is need for some clarification on the nature of these two confusing and often confused ailments.

Tularemia is a bacterial disease transmitted in nature from one animal to another by the bite of blood sucking insects or ticks. Ticks are probably the most important natural transmission agents. Most warm blooded animals are probably susceptible to infection by the tularemia organism, and the course of the disease in rabbits is rapid and frequently fatal.

Dog tapeworm infestations, unlike tularemia, represent a generally harmless assocation between parasite and host. The rabbit is merely a way-station for the tapeworm larvae which, after migrating through the liver, come to a comfortable resting place in the body cavity and await further development. Since they do not invade the meat, the rabbit is safe for consumption after the entrails are removed. These larvae are non-infective to humans, but when eaten by a dog or fox they grow to adult tapeworms in their intestines. The rabbit becomes infected by swallowing the tapeworm eggs which are passed in the droppings of the infected dog or fox.

The question faced by the hunter is how to distinguish between harmless tapeworm infestations which often show as spots on the liver, and the discolorations typically associated with tularemia infections. I have drawn two pictures which may help to illustrate the difference. You will first note that the white glistening spots of tapeworm larvae (upper drawing) are relatively few in number and may vary greatly in size. With a small pen knife you can extract each of these spots from the liver tissue and discover that it is a tough little capsule embedded in the liver mass, and possessing an individuality all its own. You would find the head of a young tapeworm inside the capsule.

Now examine the liver affected by tularemia. Its surface is thickly studded with tiny, whitish discolorations. Each of these small spots is in reality a miniature abscess composed of dead liver cells and white blood cells. There is no membrane surrounding them as is the case with the tapeworm larvae, for they are derived from the liver tissue, and are a part of it (though a dead part). You will note also that the liver is somewhat swollen. If you were to examine the spleen you will find it also swollen and bearing similar discolorations. (I have never seen tapeworm larvae affecting the spleen).

The chances are very slight that you will encounter one of our native rabbits infected with tularemia. But remember that at least 80 per cent are infested with dog tapeworm larvae. Learn to distinguish these. Then, if you encounter something different, suggesting tularemia as described here, send it to the Laboratory at Delmar and let me take the risk of determining whether it is a bona fide case of tularemia, for laboratory procedures must be used for a positive diagnosis. If, however, such an animal should be suspected of being involved in a case of human illness, the specimen should be referred to the local health authorities.

—E. L. CHEATUM

RUGGED PHEASANT

On July 8th, 703 pheasants eight weeks of age were taken from the traps in the hardening yard on the Ithaca Game Farm and placed in boxes. These birds were then transported to Steuben County for release by personnel under the direction of Richard Hyde, District Game Manager. Upon return of the boxes on July 14th, a very lively cock bird was found in one of them apparently having been overlooked by his would-be liberators.

He had had no water for at least six days and yet he was going strong. Who says our Game Farm pheasants can't take it?

STRIPED BASS

In our June-July issue we had an article entitled *Striped Bass: Fact and Fiction.* This was in two parts, the first part being a reprint of a piece written by Dr. Merriman four years ago, while the second (under the subtitle of *Rhubarb King*) was new material presented by Dr. James Westman.

In publishing the part by Dr. Westman, a shortage of time and space made necessary a cutting and editing job which was not satisfactory either to us or to the author. To compensate at least partially for this, we now have available in reprint form (no charge) both parts of this article, both as they came from their respective authors. In addition, another map (showing wintering grounds of the striped bass) is included.

Department Jobs

JUNIOR SANITARY ENGINEER

SALARY: From $4,053.16 at time of appointment to $4,889.76 in five annual increases. This salary range includes the present cost of living adjustment.

CIVIL SERVICE STATUS: Competitive civil service. Personnel recruited by means of open-competitive examination.

POSITIONS (Number and Location): There are two positions in this title in the Sanitation Unit of the Bureau of Marine Fisheries at Freeport, Long Island.

PROMOTION OPPORTUNITIES: There is a direct line of promotion to the higher grade position of Assistant Sanitary Engineer.

WORKING CONDITIONS: Majority of duties are performed in the field. Basic work week is 6 days and 40 hours. Employees earn 20 days vacation each year and one day of sick leave credit each month. Unused sick leave is accumulative to a maximum total of 150 days. Reimbursement is made for expenses incurred on official business.

RETIREMENT: Membership in Retirement System compulsory. Employee contributes on a payroll deduction basis. Variety of retirement benefits are offered.

DUTIES: Under general supervision, conducts sanitary inspections of shellfish and shellfish packing plants to insure their compliance with Department regulations. Conducting sanitary surveys of the waters certified for the taking of shellfish to determine if any polluting substances are being discharged into them in violation of law, and recommending corrective measures to remove source of any pollution. Making inspections of sewage treatment plants discharging into shellfish waters. Checking design and construction of new shellfish processing plants and renovation of existing plants. Collecting samples of shellfish, water, sewage treatment plant effluents, etc. for laboratory analysis.

QUALIFICATION REQUIREMENTS: *Physical:* Good physical condition, and freedom from any disabling mental or physical defects. *Education:* Graduation from a recognized college or university with a degree in civil, chemical, or mechanical engineering. *Experience:* One year of satisfactory experience in sanitary engineering in a public health agency or in an organization performing sanitary work of similar scope and character.

Note: A degree in either sanitary or public health engineering will qualify for appointment without the required one year of experience.

SPECIAL KNOWLEDGES AND SKILLS: Good knowledge of the principles and practices of sanitary and public health engineering. Ability to conduct sanitary inspections and surveys and to prepare reports thereon. Ability to meet with and develop good working relationships with the public, representatives of the shellfish industry, and local health officials. Possess good judgment, integrity, thoroughness, resourcefulness, and initiative.

NEXT ISSUE: *Campsite Construction Foreman.*

RIFLES IN WESTCHESTER

We hasten to correct the misstatement in the write-up of Westchester County in the last issue. *It is against the law to use any kind of rifle in Westchester County for any type of hunting.* In Putnam County rifles are legal for small game, but not for deer hunting.

We are sorry we inadvertently mixed up the counties.

KNOTTY PINE

District Forester J. D. Kennedy of District 3 (Cayuga, Chemung, Cortland, Onondaga, Tioga and Tompkins counties) has experimented with some plantation-grown red pine and found that it made very good knotty pine lumber. The grain, as well as the tight knots, showed every evidence that it might well be used for paneling.

TOPSY-TURVY (BUNNY DEPT.)

It's a topsy-turvy world; up here we're concerned with how to increase our rabbit population; we seek an ideal habitat and welcome any upswing in bunny populations. But "Down Under" (in Australia) they have so many rabbits that they're trying to reduce them by means of an artificial epidemic.

The Wildlife Management Institute reports that to check the tremendous buildup of rabbit populations, Australian authorities have inoculated and released live-trapped rabbits with a virus disease called *myxomatosis*, known to attack only rabbits and transmitted by mosquitos and fleas. Early attempts met with little success, but sickness recently flared up again and the rabbit population was reduced by some "tens of millions." Authorities see no danger of the disease exterminating the bunny, but hope that it will serve to prevent the almost unbelievable increases in numbers.

Note of irony: The rabbits were introduced into Australia—they were not native there. But once introduced, they found ideal habitat where predators, disease and competitive species were almost completely absent.

A WORD TO THE WISE (WIVES)

The United Press recently came up with an item that will confirm the suspicions of many a doubting housewife. This report concerned the experiences of Chief Warden Lester E. Brown of Maine, who, according to his own words, has spent far too much of his professional time "rammin' through the bush" looking for hunters who were supposedly lost.

"We have had many a wild goose chase in my time," he said. "A lot of those are because some guy tells his wife he's going hunting when actually he adjourns to the nearest bar."

JAIL

We have just seen a release from the California Conservation Department which suggests at least two lessons: That bad luck (according to suspicions of long standing) comes in threes, and that California really dishes it out to game law violators.

The report concerns three hunters arrested by three Game Protectors (for deer jacking), and a sentence of 300 days in jail for each of the hunters. Incidentally, violators in California during the month of June alone spent 1,262 days in jail.

CAMPSITE USE

Final figures on State campsites show that use by the public this past season far surpassed records of any previous year. The campsites (including Lake George Islands) which opened around Memorial Day and closed on September 15, piled up these figures: Permits issued, 38,321; individual campers, 139,997; camper days, 657,602; picnickers, 889,689; total individuals, 1,028,774; total man-day use, 1,547,291;—an increase of 16 per cent over any previous year.

In 1951 the permits issued numbered 26,484, the individual campers 90,990, camper days 563,065, the picnickers 761,769, the total individuals 852,759 and the man-day use 1,324,834.

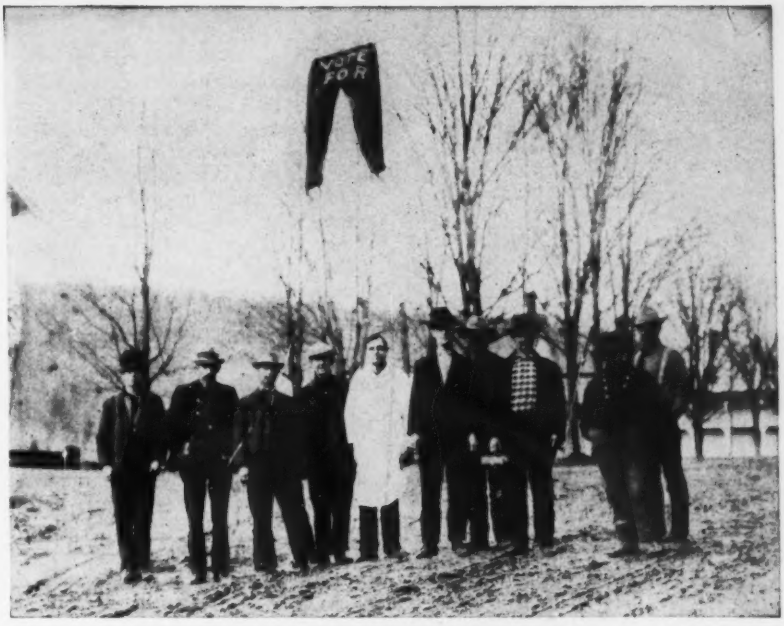
INGENUITY

The following excerpt is taken from the monthly progress report submitted by the project forester (Earl D. Armstrong) for the month of July, 1952 on the Gould Paper Company project HA-19. This is a blow-down salvage operation in Hamilton County.

"One crew of lumberjacks has a unique way of disposing of the tops of the blow-down softwood trees: The trees are all laying uphill and are very thick. Trees are trimmed, tops are cut off and thrown under the root systems which have not been cut off. The root system is then cut off and drops back on the tops, driving them effectively into and under the ground."

SPORTSMANSHIP?

The above picture shows the handiwork of one trigger—happy sportsman roaming New York. He apparently considered the three buoys (used to identify a trap net set by the Southern Fisheries District staff on Bog Brook Reservoir in Putnam County), worthy target. Result: Replacement will cost the same as what you pay for five fishing licenses.



ELECTION DAY IN SPECULATOR

Solid support for "Pants" Lawrence, campaigning for Sheriff about 30 years ago.

FUN WITH EVERETT

Among the many things we probably should have done, always intended to do, and never did is the reviewing of current books on conservation and supposedly allied subjects. The main reason for our failure to do this is laziness; a second reason is that in most of the books we get for possible review the connection with conservation is either remote (if present at all) or it's so overworked as to make the book unreadably dull. For our money, the author has yet to appear who can strike just the right balance. All this we have kept to ourselves.

We can no longer stall around, however; as threatened in our June-July issue, a book by our own Fred Everett (who does a lot of our drawings and makes most of our maps) is now out*, and we feel obliged to comment on it:

It is called *Fun With Trout*, a very handsome publishing job profusely illustrated by the author. The *Fun* idea, rather than the usual how-to-get-em theme, predominates, and as we see it there is a very potent conservation angle in this basic difference. Furthermore, there is a lot of good, sound, direct conservation in this book—not as much as we would like to see, of course—but enough to nourish the hope that some day soon there will be more sportsmen who associate better fishing with better conservation, rather than sharper hooks.

———* The Stackpole Co., publishers, Harrisburg, Pa.

CLOSING THE WOODS

Naturally, for those who plan a vacation or hunting trip in the woods, there's always been apprehension lest the woods be closed by proclamation of the Governor because of the fire hazard. But the record shows that such action has been taken only a few times in the past quarter century:

Woods in the entire State in that period were closed but three times: In 1932 on May 25 (open May 27); in 1941 on April 30, with all regions except the Adirondacks and Catskills opened May 8, the Catskills opening May 9 and the Adirondacks May 28; and in 1947, when the area north of the Mohawk was closed October 17 (and the rest of the State on October 22) with all opening on October 31.

The Adirondack area (only) was closed four times: In 1924 on October 31 and opened November 14; in 1930 on October 15 and opened October 19; in 1934 on June 1 and opened June 7; in 1938 on October 17 and opened October 24, extended to include the Catskills October 18 and opened October 24.

The entire southern part of the State except Long Island was closed in 1943 and the ban lifted on October 14.

AT LONG LAST

Lo, after many decades of intentions, a hard-top road is abuilding between Speculator and Indian Lake.

LAW: GUNS AND SHELLS

For hunting:

It's illegal to use any automatic firearm (one which will continue to fire as long as the trigger is held back).

It's legal to use an auto-loading firearm (one which reloads itself after each shot and requires that the trigger be pulled for each shot) if it hasn't more than six shells in the magazine and chamber combined. Other rifles (such as lever action and bolt action) are legal with no minimum on the number of shells they contain. And any auto-loading rifle using 22 cal. rim fire ammunition, or an auto-loading pistol having a barrel less than 8 inches in length, may be used in hunting except for deer and bear.

You may not take deer or bear with pistols, revolvers or rifles using *rim fire* ammunition or with a shotgun of less than 20 gauge; the shotgun must be loaded with shells each containing a single round ball or single slug.

You may use only a shotgun not larger than 10 gauge, with not more than three shells maximum capacity, in taking ducks.

No person may use any rifle for hunting on Long Island or in Westchester County, but this prohibition and the provision of presumptive evidence do not apply to members of target shooting clubs carrying unloaded rifles to or from the target range.

SINGLE LOG RULE

Forest District 1 (Delaware, Otsego and Schoharie counties) has requested the State Forest Practice Board to promulgate a single log rule as standard throughout the State, through whatever voluntary means are available.

This action was taken because at the present time there are no less than seven log rules used in the State in the sale and purchase of timber and logs. Confusion resulting from the use of the several rules, and the fact that the forest landowner is now at a disadvantage in selling timber because of his lack of knowledge of timber and log measurement, caused the District 1 Board to sponsor this motion.

SOUND THINKING

A far cry from the short-sighted attitude of many old-time timber barons is the recent action of major lumber companies of New Hampshire; they have entered into a co-operative agreement with the state's Fish and Game Department for the perpetuation of the deer herds on their lands. We have this on the authority of the Wildlife Management Institute.

In planning the cutting on any watershed, each company concerned will invite the Fish and Game Department to locate existing deer yards within the area, and to indicate what should be done to combine the best deer management with operational goals of the company. Deer yards are to be restricted, and cuttings are to be designed to create a patchwork of cover of varied age classes and to reserve a patch of overhead cover of conifers along stream banks.

The latter recommendation will entail curtailment of cutting by the company affected, but has been approved on the basis that the deer saved are more valuable than the logs that might have been harvested. Sound thinking.

AIRPLANE STOCKING

The airplane trout stocking which the Conservation Department does annually in the remote lakes and ponds in the Adirondack area was completed the week of September 8th. Flying conditions were perfect this year during the entire period; other years it has often been necessary to cancel flights at the last minute due to poor flying conditions.

The Department's largest plane, the Grumman goose was used for the plantings. A total of 154,350 brook and lake trout were stocked in 82 lakes and ponds; total weight of the fish stocked was 2,388.5 pounds. In one case it was possible to plant 14 waters in one flight, but there was one small pond that required a special trip. In all, 11 flights were necessary to complete the project.

In addition to this work done by the Department, each year the Board of Supervisors of Hamilton County hires a local airplane to plant remote lakes and ponds within the county. This year 50 waters are scheduled for planting in September, and approximately 125,000 trout (supplied by the Department) will be stocked in this manner.

CATSKILL MAP

Latest map to come to our attention is Rudolf R. Von Siegl's "Catskill Region Touring and Resort Map," showing among other things hiking trails, campsites, ski slopes, fishing streams. The Rhinebeck man has done a good job on this, giving the highways, railroads, golf courses, airports and points of interest in addition to a complete index. Published at Rhinebeck, the map sells for $1.50, and should meet a big demand for a good map to the Catskill Region.

SALVAGE REPORT (9)

Notwithstanding the weakness in the pulpwood market, some progress has been made in the sale of additional areas since the last salvage report in the June-July issue of this magazine. The present status is shown in the following table. An examination of this table indicates an apparent drop of four areas in the total. This was occasioned by the sale of the timber on these areas on a local sale, rather than a contract basis. It should also be noted that five additional contracts have been let, bringing the total number of projects now under contract to 131. This leaves a balance of 31 unsold contracts, 12 of which have been placed in the unsalable category because of character of blow-down, inaccessibility, etc., and upon the assumption that these will not be sold, there remains a balance of 19 contracts still open for bidding. It is also important to point out that the increase in the total cordage and board feet of sawlogs is due to the inclusion (for the first time) of the estimated quantities on the 12 unsalable contracts.

SALVAGE REPORT AS OF SEPTEMBER 1, 1952

	Contracts Executed	Contracts Unsold	Total
Number of projects	131	31	162
Acreage	103,446	70,130	173,576
Cords	231,986	240,125	472,111
MBF	27,761	11,300	39,061
Estimated receipts	$1,009,910	$852,443	$1,862,354

RECEIPTS TO SEPTEMBER 1, 1952

	Cords	Receipts
Softwood pulpwood	177,204.55	$547,642.60
Hardwood pulpwood	541.14	1,056.83
Total pulpwood	177,745.69	$548,699.43

	Cords	Receipts
Softwood sawlogs	11,420,735 BF	$88,726.39
Hardwood sawlogs	6,247,945	79,528.25
Total sawlogs	17,668,680 BF	$168,254.64
Total pulpwood and sawlogs		$716,954.07
Local sales		44,382.17
Total cash receipts		$761,336.24
Campsite salvage, estimated value		48,480.00
Grand Total		$809,816.24

Since the last report there has been salvaged a total of 76,000 cords of pulpwood and 7,500,000 feet of sawtimber. This is in spite of the soft market for pulpwood. Work has been initiated on 108 of the 131 projects and the Department has information that several of the large contractors are planning to enlarge their operations during the fall and winter months, which should result in a substantial increase in the monthly receipts.

—A. S. Hopkins

A PECULIAR FIRE

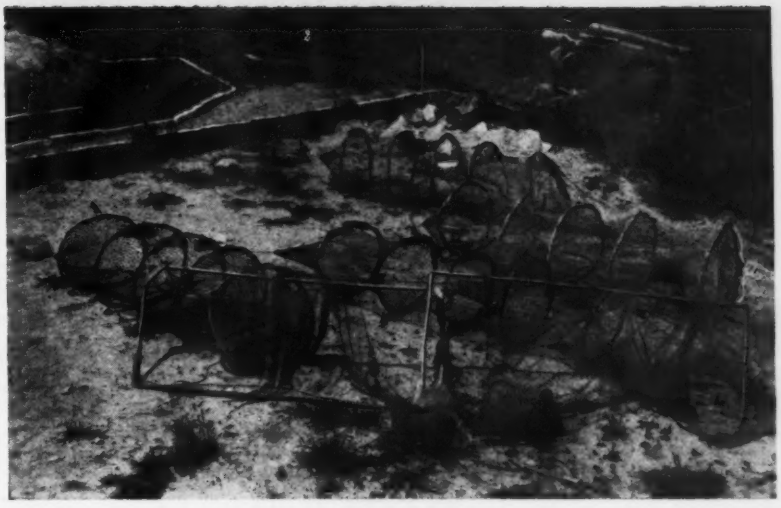
Ranger Donald Petrie of Camden reports that a most unusual fire occurred in his district in the Town of Florence on May 9th, this past spring. This fire occurred on the bank of the well-known Mad River.

The fire covered 25 acres, of which 10 acres burned almost entirely underground in a bog from two to four feet deep. The bog was old and dry and constituted an excellent type of smoldering, slow-burning fuel. Since the bog was so deep, the fire burned down as far as four feet into the ground, and presented an extremely difficult problem in suppression. Petrie wet the area down with a couple of inches of water, and in a few hours the heat from the underground fire would completely evaporate all the covering of water—and the surface would be bone dry. Then the fire would break through the top of the ground.

Hand fire line construction was impractical since the bog was intermeshed with large stumps and roots. Petrie constructed a fire line adjacent to a blow-down area near the fire by forcing water under high pressure from the Department power pumps into the bog. It was during this work that Petrie and his crew heard loud noises—something like large firecrackers, but slightly muffled—coming from the ground. Upon examination, it was found that rocks underground where the fire was burning were breaking apart when the cold water hit them. At times spurts of steam would spout into the air like small geysers for as high as 8 or 10 feet.

Since the Mad River was an adjacent source of water, Petrie's crew kept the surface constantly soaked down (after they had gotten the surface fire out) for about eight hours. Then a two-day rain followed, raising the Mad River to a point where it flooded much of the fire area. This ended a very stubborn and peculiar fire. Petrie patrolled and inspected the area after the flood waters had receded to make sure that the underground fire was out. It was.

—M. T. Dewan, *District Ranger*



SEIZED NETS

Sometime ago, Protector Robert F. Jarvis, Plattsburg, brought to me a picture for the office album of a group of illegal hoop nets seized by the Protectors of this Division from the waters of Lake Champlain. Information in connection with this photo is:

On April 24th, 1952, two hoop nets were seized from waters of Lake Champlain in Catfish Bay (which is near Rouses Point) by Protectors Jarvis, Herron, and True while patrolling the Lake with State Boat No. 091; on May 28th, 1952, two hoop nets were seized from same waters, same section of the Lake, by Protectors Jarvis and True while on patrol with State Boat No. 091.

All four nets were full of fish consisting of bullheads, perch, great northern pike, pickerel, walleyed pike, and bass which were all liberated there in the waters where nets were seized. On my instructions, nets were destroyed by burning on the spot where picture was taken.

—Ray L. Burmaster, *District Game Protector*

$10,000 FOR A TRAP

Last summer and fall, we published two articles on traps, the second under the subtitle: "The Search for a More Humane Trap." The search is on. The American Humane Association, national federation of over 600 local and regional humane societies in the U. S. and Canada (with headquarters in Albany) is offering $10,000 for a humane trap that will be acceptable to commercial trappers as a substitute for existing steel-jaw traps.

Drawings, specifications and a working model must be submitted to the Director of the Wildlife Department of the A. H. A., 135 Washington Avenue, Albany 10; competition is open to all except employees of the Association; the trap must hold without harm or kill instantly; cost, weight, efficiency, simplicity of operation and durability of the trap must compare favorably with existing traps; if the judges determine any trap worthy of a field test, the contestant shall furnish the Association with 200 or grant it the right to make such a number for use in the test but not for resale; $1,000 will be paid when the decision is announced, the balance to be paid when the trap goes into production and a minimum of 5,000 traps are sold; the inventor retains the patent rights.

SAME OLD STORY

A loyal subscriber sent us a clipping from the *Geneva Daily Times*, recounting the march of 12 little woodducks (preceded by their mama) down one of the main streets of the city. "Theirs not to question, waddle we do? They just followed their mother's example and waddled"—said the clipping.

It appears that there was the usual stopping of traffic and the usual amount of consideration given the brood. But there was also the usual sad ending: Children in the neighborhood captured at least two or three of them.

Why? Why can't they (and their parents) be taught to leave young wildlife alone?

STARLINGS: THE BRIGHT SIDE

One of our most observant observers, A. T. Shorey of our Bureau of Camps and Trails, reports that he witnessed the following:

On a very hot day this past July a horde of beetles settled on a Chinese elm in an Albany backyard. There were so many beetles that the branches sagged under their weight, and investigation showed that they were one of our worst plant enemies—Japanese beetles. Shortly thereafter, a flock of starlings landed in the elm and cleaned out every single beetle. At least, A. T. couldn't find any left.

SEASONS ON GAME

TRAPPING SEASONS

MINK — *NORTHERN ZONE Oct. 25-Jan. 31; REST OF STATE Nov. 5-March 15 EXCEPT Allegany, Cattaraugus, Chautauqua, Steuben and Yates Nov. 5-Jan. 31.

SKUNK — *NORTHERN ZONE Oct. 25-Jan. 31; REST OF STATE Nov. 5-Feb. 28.

MUSKRAT — To be announced after Nov. 15.

RACCOON — See chart of game seasons.

OTTER — *NORTHERN ZONE (EXCEPT Fulton, Washington, Montgomery, Albany, and Schenectady-NO OPEN SEASON) Oct. 25-Jan. 31; REST OF STATE — NO OPEN SEASON EXCEPT in Dutchess, Putnam, Westchester and parts of Herkimer, Oneida, Rensselaer and Columbia south of the *NORTHERN ZONE boundary — Nov. 5-Jan. 31.

FISHER — Clinton, Essex, Franklin, Hamilton, Lewis, St. Lawrence, Warren and north of Route 8 in Herkimer — Oct. 25-Jan. 1; LIMIT — 3 per season; REST OF STATE — no open season.

MARTEN — (American sable) — No open season.

BEAVER — Season to be announced.

SUCH OTHER FURBEARERS as fox, 'possum, weasel, coyote and bobcat are not protected.

TRAPPING HOURS — No trap may be staked or set before 7 A. M. of opening day of season for any furbearer. Thereafter at any hour during season.

***NORTHERN ZONE** — Is the Adirondack region bounded by Oswego River to Oneida River to north shore Oneida Lake, thence Barge Canal to Rome, thence main line NYC RR tracks to Albany and B & A RR tracks to Mass. line.

HUNTING SEASONS

	DEER AND BEAR	COTTONTAIL RABBITS	VARYING HARE (Snowshoe Rabbit)	SQUIRRELS (Gray, "Black," and Fox)	PHEASANTS (Cocks only)	RUFFED GROUSE (Partridge)	WOODCOCK	DUCKS—GEESE	RACCOON
	Deer—3" antlers (min. except sp'l season; Bear—over 1 yr. —not a cub). Limit—1 deer and 1 bear per hunter	Limit—4 per day except in counties marked with *	Limit—3 daily	Limit—5 daily	Limit—2 daily, 6 per season	Limit—3 daily, 15 per season	Limit—4 daily, 8 in possession	4 ducks daily, 8 in poss. 3 geese (exc. Snow) 3 poss. See Note	No Limit

CENTRAL AND WESTERN

ALLEGANY	Nov. 24-29 SL •	Oct. 20-Jan. 31	CLOSED	Oct. 17-Nov. 21	Oct. 20-25	Oct. 20 Nov. 23 Dec. 1-10	Oct. 20-Nov. 14	Oct. 25-Dec. 18	Oct. 29-Jan. 31
BROOME	" (7)•	Oct. 20-Feb. 15*	CLOSED	"	"	"	"	"	Oct. 29-Feb. 15
CATTARAUGUS	" •	Oct. 20-Jan. 31	Dec. 1-Jan. 31 1 per day	"	"	"	"	"	Oct. 29-Jan. 31
CAYUGA	" •	Oct. 20-Feb. 15*	CLOSED	"	"	"	"	"	Oct. 29-Feb. 15
CHAUTAUQUA	" •	Oct. 20-Jan. 31	CLOSED	"	"	"	"	"	Oct. 29-Jan. 31
CHEMUNG	" •	Oct. 20-Feb. 15*	CLOSED	"	"	"	"	"	Oct. 29-Feb. 15
CHENANGO	" (7)•	" *	CLOSED	"	"	"	"	"	"
CORTLAND	" •	" *	CLOSED	"	"	"	"	"	"
ERIE	" (8)•	" *	CLOSED	"	"	"	"	"	"
GENESEE	" •	" *	CLOSED	"	"	"	"	"	"
LIVINGSTON	" •	" *	CLOSED	"	"	"	"	"	"
MADISON	"	" *	CLOSED	"	"	"	"	"	"
MONROE	" (9)•	" *	CLOSED	"	"	"	"	"	"
NIAGARA	" •	" *	CLOSED	"	"	"	"	"	"
ONONDAGA	" •	" *	Dec. 1-Feb. 15	"	"	"	"	"	"
ONTARIO	" •	" *	CLOSED	"	"	"	"	"	"
ORLEANS	" •	" *	CLOSED	"	"	"	"	"	"
SCHUYLER	" •	" *	CLOSED	"	"	"	"	"	"
SENECA	" •	" *	CLOSED	"	"	"	"	"	"
STEUBEN	" •	Oct. 20-Jan. 31	CLOSED	"	"	"	"	"	Oct. 29-Jan. 31
TIOGA	" •	Oct. 20-Feb. 15*	CLOSED	"	"	"	"	"	Oct. 29-Feb. 15
TOMPKINS	" •	" *	CLOSED	"	"	"	"	"	"
WAYNE	" •	" *	CLOSED	"	"	"	"	"	"
WYOMING	" •	" *	CLOSED	"	"	"	"	"	"
YATES	" •	Oct. 20-Jan. 31	CLOSED	"	"	"	"	"	Oct. 29-Jan. 31

• Special deer-of-either-sex season Nov. 28-29.

Bear season extends through Dec. 15.

R — Rifle legal; S — shotgun; L — longbow.

* Cottontail limit 6 per day.

(1) North and West of line roughly from Ft. Edward to Granville via Canal, Rts. 22 and 30B to Vt. Line.

(2) South and East of boundary in **1**.

(3) North of NYC RR tracks.

(4) South of tracks.

(5) West of high tension line Coeymans to Guilderland Twps., Greene Co. to Schen. Co. lines.

(6) Rifle legal south of D & H main line tracks.

(7) Rifle legal East of Susquehanna R.

(8) Except area around Buffalo — Tonawanda Creek from East Br. Niagara R. to Rt. 78, Greiner Rd., Rt. 268, Rt. 5 West to Ransom Rd. to Rt. 33, West to Rt. 78, South to Rt. 20 to 20A to L. Erie.

(9) Except area around Rochester — Rt. 261 from Manitou Beach to Barge Canal to East Ave. in Pittsford to Allen Cr. to Irondequoit Cr. to East shore Irondequoit Bay to L. Ontario.

(10) North of Route 8.

(11) South of Route 8.

(12) East and North of Oswego R. to Oneida R. to Oneida L. North shore to County line.

(13) West and South of **12**.

(14) East of Rt. 11.

(15) North of Oneida L. and Barge Canal to Rome and NYC RR to Herkimer Co. line.

(16) East of Oswego River.

(17) North of B&A RR.

(18) North of "Zone Boundary"— Oswego R. to Oneida R. to North shore Oneida L. and Barge Canal to Rome thence main line NYC RR tracks to Albany and B&A tracks to Massachusetts line.

(19) South of boundary in **18**.

SPECIAL ARCHERY DEER AND BEAR — 1 deer either sex and 1 bear (not a cub) during 14 days immediately preceding regular season all counties.

OTHER SEASONS: QUAIL — Nassau and Suffolk Nov. 1-Dec. 31 (6 daily, 40 season); Putnam and Westchester Nov. 1-15 (4 daily, 10 season).

HUNGARIAN PARTRIDGE — Franklin, Jefferson and St. Lawrence Oct. 10-15 except Sunday (2 daily, 6 season). **RAILS, COOT, GALLINULES** — Oct. 25-Dec. 18 (15 rails and gallinules, 25 sora, 10 coot). **SEA COOT** (Scoters), **EIDERS AND OLD SQUAW** ducks — coastal water beyond harbors — Sept. 28-Dec. 31 (7 total daily, 14 in poss.) **BRANT** — Oct. 25-Nov. 8 (3 per day). **NOTE** — 1 Wood Duck daily and in poss.; 25 Mergansers except Hooded.

GUNNING HOURS — E. S. TIME — DEER AND BEAR — 7 a.m.-5 p.m.; **SMALL GAME** — 7 a.m.-5 p.m. except 9 a.m. opening day including split grouse openings; **WATERFOWL** — ½ hr. before sunrise — 1 hr. before sunset except noon start opening day; **RACCOON** (by gun) 9 a.m. opening day and any time thereafter, (by trap) no trap staked before 7 a. m. Oct. 25 or Oct. 29 opening dates.

LICENSES — RESIDENT: Hunting $2.25, Comb. Hunt. and Fish $3.75, Big Game (deer-bear) $2.25; Archery for deer and bear $5.25, Trapping $2.25; **NON-RESIDENT AND ALIEN:** Hunting $10.75, Comb. Hunt. and Fish $15.50, Big Game $10.50, Trapping $25, Archery $5.25.

FALL OF 1952

	DEER AND BEAR	COTTONTAIL RABBITS	VARYING HARE (Snowshoe Rabbit)	SQUIRRELS (Gray, "Black," and Fox)	PHEASANTS (Cocks only)	RUFFED GROUSE (Partridge)	WOODCOCK	DUCKS—GEESE	RACCOON
	Deer—3" antler (min. except sp'l season; Bear—over 1 yr. —not a cub). Limit—1 deer and 1 bear per hunter	Limit—4 per day except in counties marked with *	Limit—3 daily	Limit—5 daily	Limit—2 daily, 6 per season	Limit—3 daily, 15 per season	Limit—4 daily, 8 in possession	4 ducks daily, 8 in poss. 3 geese (exc. Snow) 3 in poss. See Note	No Limit

ADIRONDACKS AND ADJOINING

CLINTON	Oct. 25-Nov. 30 RSL	Oct. 10-Feb. 28	Nov. 26-Feb. 28	Oct. 17-Nov. 21	Oct. 10-15 Ex. Sunday	Oct. 10-Nov. 23	Oct. 10-Nov. 4	Oct. 25-Dec. 18	Oct. 25-Jan. 31
ESSEX	"	"	"	"	"	"	"	"	"
FRANKLIN	"	"	"	"	"	"	"	"	"
HAMILTON	"	"	"	"	"	"	"	"	"
JEFFERSON	"	"	" (14)	"	"	"	"	"	"
LEWIS	"	"	"	"	"	"	"	"	"
SARATOGA	"	"	"	"	Oct. 20-25	"	"	"	"
FULTON	"	"	"	"	"	"	"	"	"
ST. LAWRENCE	"	"	"	"	Oct. 10-15 Ex. Sunday	"	"	"	"
WARREN	"	"	"	"	"	"	"	"	"
WASHINGTON	Oct. 25-Nov. 30 RSL(1) Nov. 15-30 RSL(2)	"	"	"	Oct. 20-25	"	"	"	"
HERKIMER	Oct. 25-Nov. 30 RSL(3) Nov. 15-30 SL(4)	Oct. 10-Feb. 28 (10) Oct. 20-Feb. 15 (11)*	" (3)	"	Oct. 10-15(10) Ex. Sunday Oct. 20-25 (11)	Oct. 10-Nov. 23 (18) Oct. 20-Nov. 14 and Dec. 1-19 (19)	Oct. 10-Nov. 4 (18) Oct. 20-Nov. 14 (19)	"	Oct. 25-Jan. 31 (18) Oct. 29-Feb. 15 (19)
MONTGOMERY	CLOSED	Oct. 20-Feb. 15*	CLOSED	"	Oct. 20-25	"	"	"	"
ONEIDA	Oct. 25-Nov. 30 RSL(3) Nov. 24-29 SL(4)	"	Nov. 26-Feb. 28 (15)	"	"	Oct. 10-Nov. 23 (18) Oct. 20-Nov. 23 and Dec. 1-10 (19)	"	"	"
OSWEGO	Oct. 25-Nov. 30 RSL	Oct. 10-Feb. 28 (12) Oct. 20-Feb. 15 (13)*	" (16)	"	"	"	"	"	"

CATSKILLS AND EASTERN

ALBANY	Nov. 15-30 SL(5)*	Oct. 20-Feb. 15*	CLOSED	Oct. 17-Nov. 21	Oct. 20-25	Oct. 10-Nov. 23 (18) Oct. 20-Nov. 14 and Dec. 1-19 (19)	Oct. 10-Nov. 4 (18) Oct. 20-Nov. 14 (19)	Oct. 25-Dec. 18	Oct. 25-Jan. 31 (18) Oct. 29-Feb. 15 (19)
SCHENECTADY	Nov. 15-30 SL	" *	CLOSED	"	"	"	"	"	"
RENSSELAER	" RSL	" *	Nov. 26-Feb. 28 (17)	"	"	"	"	"	"
COLUMBIA	" RSL	" *	CLOSED	"	"	"	"	"	"
SCHOHARIE	" SL*	" *	Dec. 1-Feb. 15	"	"	Oct. 20-Nov. 14 Dec. 1-19	Oct. 20-Nov. 14	"	Oct. 29-Feb. 15
OTSEGO	" (6)*	" *	"	"	"	"	"	"	"
DELAWARE	" RSL*#	" *	"	"	"	"	"	"	"
GREENE	" RSL*#	" *	"	"	"	"	"	"	"
DUTCHESS	" SL	Oct. 20-Jan. 31	CLOSED	"	"	"	"	"	"
ORANGE	" RSL	"	CLOSED	"	"	"	"	"	"
SULLIVAN	" RSL#	Oct. 20-Feb. 15*	Dec. 1-Feb. 15	"	"	"	"	"	"
ULSTER	" RSL#	" *	"	"	"	"	"	"	"
ROCKLAND	" SL	Nov. 15-Jan. 31	CLOSED	"	"	"	"	"	"
PUTNAM	Nov. 15-22 SL No bear	"	CLOSED	"	"	"	"	"	"
WESTCHESTER	Nov. 15-Dec. 15 Deer Either Sex L only. No bear	"	CLOSED	"	"	"	"	"	"

LONG ISLAND

NASSAU	CLOSED	Nov. 15-Jan. 31	CLOSED	Nov. 1-Dec. 31	Nov. 1-Dec. 31 4 a day, 30 s'n.	Nov. 1-15 1 a day, 5 s'n.	Oct. 23-Nov. 17	"	Oct. 29-Feb. 15
SUFFOLK	CLOSED	"	CLOSED	"	"	"	"	"	"

LETTERS TO THE EDITOR

LAKE COLDEN

Dear Editor: Since the trails to the Flowed Lands and Lake Colden were opened July 1, I naturally scurried up there over the Fourth of July week-end and enjoyed a perfect four days of camping and seeing the place again after the 1951 "Verboten" forced me to miss the trip last year.

The wind damage made some of the scenery very sad looking but the Department workers (and particularly Ranger Rafferty) sure did some good work to clean up as well as possible. Rafferty really must have been overworking. He looked quite thin, but like other Colden Rangers, he still is concerned mostly with continuing the clean-up and trying to restore the place to a safe and better looking condition.

Please listen to my one complaint, though. I believe no trout have been stocked in the Flow or Colden for two or more years. One reason is given that the hatchery trout have the fungus disease and it is believed inadvisable to put them in where no such disease exists now. Well, can't disease-free fish be secured somewhere?

While I was in the Colden section, I saw or heard of only four trout taken from both lakes, all by deep worm-and-spoon trolling. There were few natural rises—none to our flies. I don't believe natural spawning can maintain the population up there and anyway, trolling continually removes the big breeders. For fly-casting sport, small and medium trout are needed right now.

I would still love and revisit the place even without fishing, but it seems a shame not to stock a place where trout grow so fat, highly-colored and pink-fleshed. Can you do anything to influence the stocking people in this matter?

R. W. Brigham, Haworth, New Jersey

P. S. My ten-year-old boy accompanied me this year. I would like him to start a Colden habit, including fishing.

• *Two different explanations apply to recent lack of stocking in these waters. As you may know, the dam of the Flowed Lands was under repair in the fall of 1950, and in 1951 the level was still down at planting time. This year conditions are normal and this water will be stocked. The Flowed Lands are stocked by 'plane.*

Up until 1946 Lake Colden was stocked by personnel of the Crown Point Hatchery. At that time demands upon the time of the hatchery personnel became such that this carry-in had to be dropped. An attempt was made to stock by 'plane but the physical setting of Lake Colden is such that 'plane stocking is too dangerous with available equipment. We have therefore reached a temporary impasse in this matter. Means of distribution to Lake Colden are presently under study and I believe a solution of the problem will be found this fall.

Incidence of disease had no connection with failure to stock these waters. Trout available for stocking are always pro-rated to the various suitable and accessible waters according to the supply from all our hatcheries.—C. W. Greene, Senior Aquatic Biologist.

TAGGED TROUT

Dear Editor: While fishing on Seneca Lake on July 20, 1952 I caught a lake trout with the following tag: NYCD F6302. Weight 12½ pounds. No spawn, and the man who dressed it said it was a male trout. Would you please send me the record of this fish?

C. H. Spicer, Wellsville

• *The trout bearing tag #F6302 was tagged and released on October 10, 1946 at Peach Orchard Point. At the time of release this mature male trout was 30¾ inches in length and weighed 9 pounds 3 ounces. To complete our records I would appreciate knowing the exact location on Seneca Lake where this fish was caught, if possible—U. B. Stone, District Fisheries Biologist*

Across from Heatley's boat livery and in front of the Boy Scout camp. About 14 miles up the lake from Watkins Glen.—C. H. Spicer

• *This seems to bear out our contention that as the season progresses, trout move toward the spawning grounds at the south end of the lake. It's interesting to note that this fish had been "legal game" for six years before anybody cashed in on him.—U. B. Stone*

SAY, BUB

Dear Sir: Say Bub, when are you going to run a story on Seneca Lake? Also, what's this bunk about a 2-day doe season after the buck season? I can see it already—some more trigger happy jerks go into the field for a week, does slaughtered by the hundreds all week long, and when it comes to the two days of doe season there won't be a deer this side of Pennsylvania. Who ever had this wonderful brain storm and made this law needs a good kick where their brains are, and theirs aren't in their heads.

Ken Knobel, Rochester

• *For the story on Seneca Lake, see Oct.-Nov. issue, 1946. A reprint is enclosed. As to the deer-of-either-sex season, the reason that another one is required this year is that the deer seem to disregard your predictions; there are too many of them this side of Pennsylvania, in spite of previous seasons of this type.—Editor*

SICK PHEASANTS

Dear Editor: We have raised a few pheasants to be released, but lately they have started with a cough and then choke to death. The windpipe is full of red worms. Do you know of any cure or medicine that will help? If so, we'd certainly appreciate hearing from you.

Lars Flaaten, Millbrook

• *Your pheasants have gape worms. We enclose a sheet on which are directions for mixing Barium antimonyl tantrate dust. This is what we use on our game farms, but it cannot be obtained commercially.—Earl R. Holm, Supt. of Game Farms*

Christmas IN OCTOBER?

yes, and five other times a year when you give your friends . . . .

THE CONSERVATIONIST

we will send them a nice looking Christmas Card, telling them the gift is from you.

DEER AND CHILDREN

Dear Editor: I would like to tell you about the young deer who visited our neighborhood. Around 6 o'clock one evening he wandered into the section of Gardner Terrace and Kenwood Avenue, Delmar. A pail of water was given for him to drink and carrots were suggested for him to eat. Within a very short time, to the dismay of many a mother, the refrigerators were cleaned of carrots.

After the deer had been in the yard about a half hour he realized he was among friends and accepted the carrots from the hands of the children and drank frequently of the water. In return the deer stayed close to the children allowing them to stroke his neck.

Finally the game warden was called to take him away—much to the protests of the children and the displeasure of the deer.

Willis Haker, Delmar

POISON IVY

Dear Editor: On page 32, August-September *Conservationist* is an item in re poison ivy and hay fever. The best remedy for poison ivy is jewell weed, sometimes called *touch-me-not*. The plant is watery and grows most everywhere that poison ivy does. Just smash it and rub it on and you will find relief. I don't know of any cure for hay fever. All I know about hay fever is that some people think a grass widow is a woman whose husband died from it.

Fred C. Ralph, Erie, Pa.

NO CRANES

Dear Sir: (A) claims there are no cranes in Westchester County (except in captivity) nor have there been any. He claims the large birds we have seen from time to time were herons.

(B) claims he has seen cranes and is backed up by several fishermen. Who is right?

Walter F. Reinhardt, Ardsley

• *(A) wins. About 100 years ago the whooping crane and the sandhill crane were occasional visitors in New York, but birds of this sort now seen are various species of heron, bittern or egret.—Editor*

FOREST PRESERVE

Gentlemen: Since the controversial subject of our State Public Lands Management was introduced in *The Conservationist*, I have been conducting a public opinion poll among many people regarding their feelings in the matter.

Most of the people I have talked with have special interests in the Adirondack Park, but whatever their interests, their reactions were remarkably homologous. Some of the opinions which have appeared many times are as follows:

(1) Almost 100% agreed that the November blow-down project has been handled in a practical manner; and that much good can come of this catastrophe in that the extensive openings will greatly benefit wildlife once the fire hazard has been reduced.

(2) Almost all were wary of future logging operations on State land after the cleanup is complete, even under the supervision of the Conservation Department. Most believed that State lands could conceivably become political instruments for personal gain if once opened to private enterprise.

(3) Many times people told me that they were satisfied that there was already too much commercialization in the Adirondacks in the form of signboards, roadside stands, etc. and most were unalterably opposed to further commercialization in any form, particularly on State-owned lands.

(4) Several sportsmen were in favor of controlled burning and cutting practices to increase browse for the Adirondack deer herd by whatever means necessary.

(5) Of those who had visited other States, 100% agreed that our Adirondack campsites were the finest encountered in physical makeup and facilities; all but two of 53 questioned viewed the nominal daily charges as fair and just.

(6) Generally speaking, most of the people questioned were satisfied with the handling of the State Parks by the present Conservation Department and the Legislature of the present regime—but, significantly, many were anxious for a public referendum before any major changes in public land management policies were initiated; particularly with reference to the Adirondack and Catskill areas.

Stanton G. Ernst, Baldwinsville

Dear Sir: Re the article "Zoning the Forest Preserve." Personally I am in favor of controlled cutting in the parts of the Forest Preserve little used for recreation, but to propose all these "management programs" now is rather silly. Why not have a Constitutional amendment proposed and introduced, which would accomplish two aims, namely: (1) It would clear the air and set forth the Department's objectives in black and white, and (2) it would enable public opinion to act to decide the question, "cutting or not, and how much?"

This is the democratic way of doing things, and as long as Article XIV stands unchanged in the State Constitution, all the blue printed forest management programs in the world won't do you a bit of good.

Douglas De Nike, Albany

• *That's right. But we feel that as yet, not enough factual information about the Forest Preserve is available even to "blueprint" a program. And when the information does become available as a result of current surveys and detailed investigations, it will be the Milmoe Advisory Committee and not this Department that will come up with a program. As we said in our last issue, the Department's role at present is merely that of a consultant, supplying information as available and as requested. We think this is as it should be.—Editor.*

DEER AND CHILD

Dear Editor: Enclosed please find picture which I am forwarding to you in behalf of S. Brownell of Buskirk, N. Y.

These deer were wild and taken in an open field south of Cambridge by use of a telescopic lens. Knowing the rare chance of obtaining a picture such as this other than on a game farm, we thought you may possibly have some use for it.

G. B. Gould, Shushan

"A FALLING OBJECT"

Dear Sir: In looking over your magazine for December-January '51-'52, under "Letters to the Editor" I noticed one entitled "Collecting For Damages" by Arthur Kemmet, Schuylerville.

I know our State law does not cover for damage to an auto resulting from striking a deer on the highway, but I do know that the car owner can collect by means of his insurance—under certain circumstances: About a year ago, a friend of mine was driving to work in Westchester County when a deer jumped from the side of the road onto the hood of his car. The deer was of course killed and the car damaged quite extensively. The entire cost of the repair bill to the car was borne by the insurance company on the basis of "a falling object." Perhaps Mr. Kemmet would be interested.

George K. Hagemeyer, White Plains

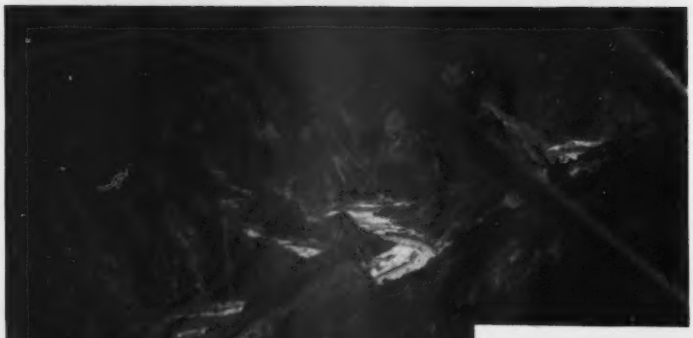
• *We are, anyway.—Editor*

REVERSED (DEFINITELY)

Dear Editor: I suppose you will get about 9,000 cards about this, but I will tell you anyway: The musky and northern pike are reversed on page 21 of the August-September issue.

C. W. Richwine, Rome

• *You were one of about 20,000 unlucky subscribers; the remaining 47,000 got copies in which this mistake was corrected. Yes, we've had plenty of cards, letters and 'phone calls that we'd prefer to forget. The first to sound a gleeful Bronx cheer was the Mayor of Albany, who seems to get his magazine (and read it all too carefully) early.—Editor*



WHIP SAWS AND INDIA

Dear Editor: "Yes," is my reply to your photographic question that appeared in the last *Conservationist*: "Ever see a whip saw?" Hoping that it may be of passing interest, I am enclosing a picture that I took last November at Sadya, on the north bank of the Bramahputra, in Assam. A more modern sawmill was washed away in the floods following the earthquake in August, 1950. The fellows in the picture are trying (in the manner traditional in most of India) to salvage some of the timber still being washed down by the waters from the bursting of nature's earthquake dams thrown up nearly two years ago, high in the Himalayas.

To illustrate the appalling extent of the damage from 'quake and recurrent floods (at the present moment the monsoon is spreading renewed havoc) I send along some pictures taken over the area from a tea planter's monoplane. The white spots on the mountains are not snow, they are bare places, denuded in the course of three minutes. Along with practically all fish and game in the area, the forest was widely destroyed. The river here is now almost 15 miles wide and no longer navigable for the Mississippi type steamboats that formerly provided the main means of transportation in outer Assam. Sadya has been all but abandoned to the depredations of the five rivers that come together there to form the Bramahaputra.

L. F. Wilson, Calcutta, India

A BIG TRACK

Dear Sir: I thought maybe you would be interested in the footprint of a big cat which my wife and I saw last Thursday on the Blue Trail to Marcy just north of Plateau Lean-to. There is some grass there and many fresh deer tracks wherever the trail is muddy.

The single cat track was about 2/3 the width of the Trails-to-Marcy booklet issued by the Conservation Department (about 3¾ inches) and nearly as wide. It was a perfect impression an inch or more deep. The four toes were round like large marbles and the three to the East (it was facing North) had very narrow claw slits in the mud which could be seen only by looking very closely. The ball of the foot was also round—a little larger than a golf ball. If it was a bobcat or even a Canada lynx, it sure was a whopper.

You also might be interested in the fact there is sort of a gray fungus infection on considerable numbers of spruce which has killed many trees already. This was seen near the junction of the Hopkins trail and the Slant Rock trail.

Jesse Dildine, Geneva

• *From your description, we'd say the track was made by a coyote or coy-dog; it's too large for a bobcat and too small for anything but a baby lynx. And claw marks almost never show in tracks made by the cat family. As to the "gray fungus" on the spruce, it sounds like lichens—often present on old trees but not killers. The spruce were probably killed by bark beetles.—Editor*

DOE WITH FIVE FAWNS

Gentlemen: I would be very much interested in receiving an explanation of something that seems incredible to me.

Last evening four of us went for our usual ride when we saw a large doe, and five baby deer about the size of a collie dog followed her. They were the only deer around and we watched them for fifteen minutes, expecting other does to follow. They walked and played along the edge of a long field until out of sight—always keeping very close to the "mother."

Now tell me, is it possible for a doe to have five fawns? They were all the same size! Do you suppose she would be mothering lost ones?

Harold H. Jackson, Port Jervis

• *We have records of doe deer carrying four fawns in the embryo stage, but have never heard of five. A doe fairly often "adopts" orphan fawns, however.—Editor*

LAKE MAPS

Dear Sir: Many times have I fished strange waters, coming away with the usual wet and hungry qualities of the disappointed angler. Your maps supply the "know-where" one customarily pries out of an old timer (if lucky). Brant Lake floored me last year, but I followed your information on Big Tupper and on Upper Saranac, and made out like the "old timers." Thanks.

Charles Caffall, Sr., Elmhurst

GUN COLLECTORS (2)

Dear Sir: Will you tell H. Irving Moore of Troy (page 38, June-July) that I believe that if he lacquered his powder horns with a good light colored lacquer his trouble (worms eating into his collection) would be over. Use a very light color so horns will appear more natural.

W. H. Gillies, Stephentown

BULLET

Gentlemen: I am enclosing a photograph of a bullet which I found in an old house. The bullet is 2¼ inches long and ⅝ inch through at its widest part. It has no numbers or other identifying marks. Please advise me as to the kind it might be.

Logan Pomella, Sharon Springs

• *We referred this one to the undersigned, who wrote:*

"Fortunately, I can supply you with some dope on the cartridge since I've had some experience with it. This cartridge was designed for the Burnside carbine, patent March 25, 1856 by Gen. A. E. Burnside, 55,567 of which were purchased by the Govt. for use in the Civil War. They were in general use by the cavalry until after the Custer massacre.

"The cartridge was one of the earliest made of brass and was loaded into the front of a tilting chamber in the carbine. The bullet is conical, .54 caliber and crimped to the brass. The cartridge has no primer but, instead, has a small hole in the rear of the case through which the flash of the percussion cap fired the powder. This was one of the early attempts to make a single-package load for a breech loading arm, but the boys hadn't yet hit on the idea of putting the primer into the case."

—Larry Koller, Argosy Magazine

MUSHROOMS

Gentlemen: I would like to get in touch with someone in Albany who knows the mushrooms. I have been studying them and eating them, many varieties, for 50 years, all by my lonesome. This summer we have been enjoying several messes of *Craterellus cantharellus*. Several years ago we had enormous quantities of a *Pleurotus* not listed in any of the books, so I named it after our place here, *Pleurotus pinacris*.

How can I get a copy of the N. Y. State Museum Handbook No. 11, by Krieger, mentioned in the mushroom article?

Charles F. Potter, Corinth

• *We suggest you write direct to Dr. Eugene C. Ogden, State Education Building, Albany, N. Y.—Editor*

AMANITAS

Dear Editor: We live in a wooded section and have lots of "toadstools" in the yard. Thanks to your article I found most of ours are the fly mushroom and of course poisonous.

We have a young son soon to be in the toddling stage and I'm wondering if there is any preparation you can get to put on the ground to keep these mushrooms from growing? I keep pulling them up—roots and all—but they keep "popping" up overnight.

Mrs. John Fuller, Big Indian

• *We have it from the author of the article, Dr. Ogden, that amanitas can in some situations be controlled by creating soil conditions unfavorable to them—on lawns, for example. But such a procedure would be impractical on extensive areas.—Editor*

EASY PADDLES

Gentlemen: The article "Easy Paddles" in the August-September 1952 issue came at a time when a few Scouts and myself are planning a canoe trip. We plan to take two short week-end trips close to home on which we can camp, canoe and possibly fish.

You describe a trip from above Hadley on the Hudson upstream for several miles to Stony Point. The only Hadley I can find in New York is over 200 miles upstream of Stony Point. Is this the Hadley you refer to or is there another one, if so where is it?

Henry Mahler, Union City, N. J.

• *You got the right Hadley, we got the wrong Stony Point—we should have said Stony Creek. —Editor*

Dear Sir: In reference to "Easy Paddles" in your August-September issue; giving the location of Cayuta Lake, someone is all wet and I don't mean from going overbroad. Cayuta Lake is in Schuyler Co. about 10 miles N.E. of Odessa or about 30 miles S.W. of Ithaca and nowhere near highway 22 & 28.

I believe you mean Forestport Res. (Near Alder Creek).

Ray Weimer, Mt. Morris

• *Yes; a section of Forestport Reservoir is called Kayuta Lake, and is so designated on the new U.S.G.S. maps.—Editor*

RED SALMON

Dear Sir: Lake Luzerne in Warren County has recently been stocked with game fish (landlocked salmon, I have been told by local gossip). Can you tell me the facts? And if they are indeed salmon, when may they be taken? Is trolling the usual method of attack?

C. M. Lederer, Long Island City

• *Lake Luzerne has been stocked experimentally with red salmon—a small Pacific salmon which seldom gets larger than a pound. This fish is primarily a plankton feeder and, where established in fresh water, offers the double utilities of forage and game fish. They can be taken by fly fishing and since they are not mentioned in the law, fishing for them is unrestricted. But they are not easily taken, so it's doubtful whether they will need protection even if they become firmly established.—C. W. Greene*

SPEARED TROUT

Dear Sir: Quite a sportsman (?)—the person responsible for the inch long, ⅞ inch deep spear wound in this sixteen-inch brown!

Said sportsman (?) better watch his step along Barden's Creek between Martindale and Philmont, Columbia County; Dad and I do a lot of fishing in that section!

Fred'k Schonbrunner, New York City

GAME LAWS

Dear Sirs: I enjoy *The Conservationist* very much, but would like to see the N. Y. State game laws printed in your magazine.

Jim LaRue, Middletown

• *One of many such letters over the years. See pages 34 and 35 for the best we can do at the moment.—Editor*

PANTHER

Gentlemen: I am enclosing a clipping from a Gowanda, New York newspaper concerning the sighting of a panther in our area. I would appreciate your comment, either in your column or by letter.

J. Harry Ecklund, Jamestown

• *The clipping describes an animal with "big, pointed ears." Panthers have little round ones. —Editor*

CREDITS

Pages 4, 5, Earl McGuirk, Fred Chambers; 10, 11, Al. King; 13, 25, Fred Everett; 14, 15, 17, J. W. Freese, Nick Drahos; 20, 21, P. W. Fosburgh, Nick Drahos, Doug Finch; 22, P. W. Fosburgh; 24, E. W. Littlefield, H. W. Holcomb; 26, 27, Earl McGuirk; 31, Arthur Tefft.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, AND CIRCULATION REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933; AND JULY 2, 1946 (Title 39, United States Code, Section 233) OF THE NEW YORK STATE CONSERVATIONIST published bimonthly at Albany, N. Y., for October 1, 1952

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5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

PIETER W. FOSBURGH, Editor

Sworn to and subscribed before me this 4th day of September, 1952.

AGNES M. KEENAN
[Seal] Notary Public, State of New York
Appointed for Albany County No. ——.
My Commission Expires March 30, 1954.

Master Rock Rodfield

THIS is a true story about a true hunting dog. You can't go very far inside the outdoors without running into one. But this dog was special.

Back in the beginning all dogs were hunting dogs. But Man, who changes all things, has changed the dog so that the hunting instinct has been bred out of most of these Man-made breeds. In a comparative few, the hunting instinct not only has been preserved but refined and it has been directed to a point of almost incredible specialization. Examples are the modern pointer and setter, dogs used to hunt such game as quail, pheasants, woodcock and grouse. These dogs not only are trained how to course back and forth through the most likely hunting cover but to halt and stand, pointing with tails ramrod steady, when their noses tell of game nearby. Good pointers and setters thus hold the game unalarmed and quiet while the forewarned hunter moves in to make it fly.

Nowadays, game seasons are short and many hunting dog owners help take up the slack by running their highly-trained animals in field trials where the dogs compete on planned courses and under highly specialized rules of performance.

In the case of pointers and setters the dogs are divided into classes, usually based on experience, and are run a brace at a time over the same course. First braces out have the advantage of finding, and pointing, what local game there may be on the course. To help balance the equities quail or pheasants often are liberated for each brace of dogs in what is known as the "bird field", usually in sight of the gallery.

We first ran into this true hunting dog in 1927 at the spring meeting of the Orange County Field Trials Club, held near Middletown on imported Texas quail. The dog was a young English setter named Master Rock Rodfield. His owner, W. Lee White of Stamford, Conn., had entered him in the dog's first important stake. It was a big entry and the braces had been running in half-hour heats since dawn. Now it was noon and a caterer was dispensing food to the gallery and to the tired judges and handlers.

Our part was to liberate the quail in the bird field but we also had a new Graflex and a need for pictures. Lee stood there with this setter waiting to go with the first afternoon brace. A quail was dead in the crate. Most field trials setters won't pose with such a bird. But Rock did. Here it is on this page. Maybe you've seen it on calendars.

Rock Rodfield & Quail

Rock went out and ran a magnificent heat. When he came on the quail in the bird field he turned in a breath-taking point—tail high, body queerly twisted as he checked from a dead run sharply to the scent. He won hands down. We saw him many times after that. It was always the same—beautiful dog, great workman, win after win. And Lee and Rock were always together.

We never really liked the photograph because we felt that Rock and ruffed grouse were more of a kind. So one day we got a grouse and posed it with the same picture head. It is on the opposite page. So much for the background.

Over the years Rock ripened into a magnificient setter. Measured in terms of field trial performance, he was famous and was many times a champion. But more than that, he became an almost human field companion and few were the New England grouse hunters who didn't know of him—or of Lee, both together.

Rock's cup ran over when the maples flamed and the birches turned yellow and fluttered their crisp leaves over the green-gold carpets under the aspens. For it was then that the grouse broods were trying their new wings of maturity and leaving old covers for the beech groves, the fruity edges of the hemlock woodlots and the winey pickings of old orchards.

The years slowed his pace, of course. For a time he was content to sit in Lee's station wagon and watch the young dogs go. Or wander around the field trials galleries, wagging his tail for old friends, making new ones with his eyes.

When he was about thirteen, the old muscles sagged and he grew weaker. Finally he was unable to walk. But he still could thump his tail and raise his head and use his eyes.

Lee used to carry him outdoors on nice days and lay him gently on the grass under the apple trees. And the White family began to eat outdoors under those trees more and more. Guests would come and there'd be a picnic. Rock would be host and they'd all bend down to pat him and his tail would go thump, thump and his pink gentleman's tongue would show while he grinned.

If we remember rightly, Rock was nearly fifteen that particular autumn. It was a yellow day of Indian Summer when the haze blended the crimsons of the sumacs along the hedgerows. Guests arrived. The tables were set out under the apple trees. Lee carried Rock from the big house and the old ritual of solemn greeting and tail thumping was renewed. But by then the tail made just a feeble slither in the browning grass.

The meal was half over when Rock lurched to his feet, standing for the first time in many seasons. His nose quivered. And then he began to walk! His hind quarters dragged a little. But he walked. Conversation stopped. All stood. Rock kept on, 50 feet, 100 feet straight to the old stone fence where wild grapes wrestled some small red cedars. And there he stopped and his great plume of a tail went up—starched. His neck straightened and slowly, slowly up came the right front foot and its swollen joint bent deeply and closely to the long fringe of his chest. A glorious, unbelievable point!

Mrs. White said softly, "Oh no, it can't be."

Lee drew in his breath, walked quietly to the dog. Field trial memories flooded back and he gave the old assurance.

"Steady Rock," he said, "steady my friend."

Lee moved, unbelievingly, into the tangle and a gorgeous, screeching cock pheasant rocketed straight up. For seconds, startled eyes were on the bird and when they looked down Rock already lay dead upon the grass.

—CLAYT SEAGEARS

GROUSE WOODS AUTUMN **(Master Rock Rodfield)**

Courtesy
N.Y.S. Museum

REDHEAD
Aythya americana
(Eyton)
Males

CANVASBACK
Aythya vallisneria
(Wilson)
Female, Males

All ¼ nat. size